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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1989

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

S. 2355

AUTHORIZING APPROPRIATIONS FOR FISCAL YEAR 1989 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 3

PROJECTION FORCES AND REGIONAL DEFENSE

MARCH 23; APRIL 12, 14, 1988

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1989

WEDNESDAY, MARCH 23, 1988

U.S. SENATE,
SUBCOMMITTEE ON PROJECTION FORCES
AND REGIONAL DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

SAVINGS ASSOCIATED WITH EARLY RETIREMENTS

The subcommittee met, in open session, pursuant to notice, at 1:35 p.m., in room SD–430, Dirksen Senate Office Building, Senator Edward M. Kennedy (chairman) presiding.

Present: Senators Kennedy, Warner, Cohen, Symms, and McCain.

Staff present: Ronald P. Kelly, Norman G. Mosher, and Mark B. Robinson, professional staff members; Lori M. Jackson and Cindy Pearson, staff assistants.

Also present: Jeffrey B. Subko, assistant to Senator Exon; Gregory B. Craig and William J. Lynn, assistants to Senator Kennedy; Milton D. Beach, assistant to Senator Glenn; Terrence M. Lynch, assistant to Senator Shelby; Dale F. Gerry, assistant to Senator Cohen; and Anthony H. Cordesman, assistant to Senator McCain.

OPENING STATEMENT OF SENATOR EDWARD M. KENNEDY, CHAIRMAN

Senator KENNEDY. The committee will come to order. First of all, we appreciate the adjusting of the schedules of our witnesses today.

The chairman has called an important meeting of the committee at 3. We have a full panel of witnesses on important matters, and so I hope we can move along as rapidly and as thoroughly as we can.

This afternoon the Projection Forces Subcommittee reviews issues in the President's fiscal year 1989 Department of Defense budget request.

We will hear testimony on the response to the amendment to the Defense Authorization Act, which required the Secretary of Defense to determine the savings and operational effects associated with maintaining current aircraft carrier force levels by retiring two World War II carriers as new carriers join the fleet in the early 1990's.

Our amendment asks that the specific savings be identified. Vice Adms. John Nyquist and Robert Dunn are here to discuss the Navy's response, and to answer any questions about it.

I also asked the General Accounting Office and the Congressional Budget Office to undertake similar studies. Mr. Bill Thurman of the General Accounting Office and Robert Hale of the Congressional Budget Office are here to present their studies.

I have asked Mr. Ronald O'Rourke of the Congressional Research Service to review the three studies and to prepare a summary integrating them. And I want to thank Mr. O'Rourke for the excellent work the members have before them.

The levels of savings is dependent on three assumptions: (1) What happens to personnel when their units are retired? Will the Navy strength be reduced or will personnel be distributed to other units?

(2) What happens to the aircraft when a wing is decommissioned? Do the planes stay in service to relieve shortfalls? The savings available will not be as great as if planes are retired.

(3) Can indirect costs be calculated? If they are ignored, savings are less. If identified, savings are likely to be greater.

Holding the carrier force to 14 deployable ships instead of 15 for a few years would enable us to retire the two World War II carriers. And the savings range from a level of about $1 billion to a high of $5 billion.

These savings could offset between 17 percent and 79 percent of the cost of the two new carriers authorized and appropriated last year. In short, by delaying expansion to 15 carriers for a period of a half a dozen years, we could help pay for two new ones.

The second part of our amendment required an operational assessment by the Joint Chiefs of Staff. Can we get along without the 15th carrier for this period? What are the risks involved? Major General Ryan, the Director of Force Structure, Resources, and Assessment for the Joint Chiefs of Staff is here to present the Secretary's response to these questions.

We will hear from the Navy first, followed by the General Accounting Office, and then the Congressional Budget Office, followed by General Ryan. Senator Cohen will be joining us very soon. We regret that he will not be able to be here until 2. Senator McCain.

Senator McCAIN. Thank you, Mr. Chairman. I think we all recognize we are going to face some hard and difficult tradeoffs because of the current reductions in defense spending.

This is as true of the Navy as the other services, and there is no question that we are either going to have to increase defense spending or see cuts in the readiness, strength, and modernization of the Navy.

I recognize that the early retirement of our oldest carriers is one way of making such tradeoffs. To be honest, however, Mr. Chairman, I do not believe that we should establish a requirement for study that only examines one option for making such tradeoffs or that focuses solely on carrier retirement.

The issue we really face is how the Navy can best meet its requirement for 15 carrier battle groups within the new budget guidelines set forth by the Secretary of Defense.

It is what overall mix of tradeoffs will allow the Navy to make the best compromise between modernization, force strength, and readiness, and what level of supplemental funding, if any, will be required to correct any major deficiency in meeting that goal.

We have already received nearly a solid inch worth of material studying carrier retirement from CBO, GAO, and the Navy. The net result is not encouraging. The savings initially seemed to be impressive, but they are calculated without any attempt to calculate the cost or the risks that will be run in falling below what the U.S. Navy stresses is a minimal military requirement.

The studies largely ignore the fact that early retirement of the carriers will cause costly turbulence, and the studies ignore the fact that even one extended deployment of remaining carrier, because of the absence of the *Midway* or *Coral Sea,* could lead to massive manpower retention problems and cost.

We are experiencing right now, Mr. Chairman, a significant exodus of Navy pilots from the U.S. Navy, and I am convinced that if we extend the carrier deployments in order to make up for the reduction of two aircraft carriers, we will not stanch that flow.

And when we are talking about savings of money, it costs $6 million to train a qualified combat pilot. And those are nearly irreplaceable in many respects.

Most of the supposed $1 billion of savings that might come, early retirement of carriers per se might well add to increasing the cost of our defense budget, while simultaneously increasing the military risks to our country.

As for the higher levels of savings examined in the studies, the only way that such savings appear through retiring the *Midway* and *Coral Sea* is if we make such serious additional cuts in personnel, ship, aircraft support, and facilities, that we will never be able to cost effectively sustain a 15-carrier battle group Navy.

We cannot act on studies that do not come to grips with the impact on personnel skills and retention, of trying to meet our commitments by longer tours of duty.

We cannot act on the basis of studies that do not address the military risk of an early retirement of our carriers, that do not address the cost benefits of funding more DOG–51's, and they do not address the mission capabilities of our current and projected naval air assets, except in terms of total number of wings.

We do need a study from the Navy of its ability to meet its long-term military commitments. I think we are all weary of hearing about the 600-ship Navy, when this slogan is used as a substitute for a careful analysis of force requirements and program capabilities.

Such a study, however, should take the form from a much broader analysis of the Navy's ability to meet its mission capabilities with the funds projected in the current FYDP of possible tradeoffs and of the potential requirement for limited amounts of additional funding.

It should review our ability to meet our commitments in a net assessment context, and it should validate our maritime strategy without being constrained by specific tradeoffs like carrier retirements, or magic numbers like 600 ships.

Mr. Chairman, I would support efforts by the subcommittee to establish such a broader study requirement. If nothing else, it would put an end to former Secretary Lehman's slogan, which now threatens to be as haunting as the Flying Dutchman's curse.

It would allow the Navy to get on with the kind of work that its net assessment people in OP '96 should really perform. It also, I believe, would fully justify the need for 15-carrier battle groups and show that there are many other ways of making the budget tradeoffs for fewer military risks. Thank you, Mr. Chairman.

Senator KENNEDY. Thank you very much, Senator. Well, we hope at least that Major General Ryan, as well as the other witnesses, will be able to talk about some of those issues.

The chart included in the CRS statement summarizes the various studies which have been made about earlier carrier retirement. Their results vary because, as I mentioned at the outset, they make different assumptions about end-strength reductions, what retirement of planes and indirect costs.

[The prepared CRS statement follows:]

SUMMARY OF SAVINGS ESTIMATES PREPARED BY DOD, CBO AND GAO FOR SECTION 1223 OF PUBLIC LAW 100-180 (H.R. 1748) [1]

Seven basic estimates depicted. DOD submitted a single estimate. CBO's and GAO's data packages can be used to form several different estimates, depending on the kinds of savings the user wants to include. The attached graph depicts seven estimates—the DOD estimate, and the three most inclusive estimates from CBO and GAO.

Estimates range from $1 billion to $5 billion. The estimated cumulative savings depicted on the graph range from about $1 billion to about $5 billion. (The range for BA savings is $1.1 billion to $5.1 billion; the range for outlay savings is $1.0 billion to $4.9 billion.) The precise amount of savings is arguably less important than understanding why the estimates differ from one another.

Accounts where savings occur. The savings would occur principally in operation and support (O&S)-related accounts: MPN, OMN, and OPN. The larger GAO estimates include some savings in SCN and WPN due to delayed procurements.

Key differences between high and low estimates. The higher and lower estimates differ from one another in large part because of their treatment of three key issues:

Disposition of "freed up" end strength. The higher estimates eliminate from total Navy end strength the "freed up" end strength associated with the 15th carrier and 14th airwing. The lower estimates tend to retain and redistribute the "freed up" end strength to reduce end-strength shortfalls elsewhere in the Navy.

Disposition of "freed up" carrier aircraft. The higher estimates eliminate "freed up" carrier-based aircraft from Navy operations. The lower estimates retain and redistribute some of the "freed up" aircraft to reduce aircraft shortfalls elsewhere in the Navy.

Inclusion of indirect O&S savings. The higher estimates include savings in indirect as well as direct O&S costs. The lower estimates include savings in only direct O&S costs. When included, savings in indirect O&S costs account for about 20%-40% of total savings.

Table 1 summarizes some of the methodological similarities and differences between the seven estimates depicted in the graph.

Other CBO and GAO estimates possible. CBO's data package permits the creation of lower estimates that exclude airwing savings, indirect O&S savings, or both. GAO's data package permits the creation of lower estimates that exclude indirect O&S savings, delayed procurement savings, or both.

CBO estimate "2a" vs. "2b". CBO estimates "2a" and "2b" differ only in that the former looks at the effects on the 050 national defense budget function, while the latter looks at the effects on the total federal budget. This creates a difference in

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[1] Prepared by Ronald O'Rourke, Analyst in National Defense, Foreign Affairs and National Defense Division, Congressional Research Service, March 18, 1988.

outlay (but not budget authority) savings that is primarily due to the fact that the military retirement trust fund is outside the 050 budget function.

DOD estimate and treatment of end strength. DOD says its estimate assumes that the "freed up" end strength is eliminated from total Navy end strength. DOD's total dollar figure, however, is similar to CBO and GAO estimates that assume that the "freed up" end strength is retained and redistributed within the Navy.

No change in operational tempo. All seven estimates assume implicitly that the operational tempo (OPTEMPO) of the remaining carriers and airwings will not increase above current levels to compensate for the elimination of one carrier and one airwing from the planned force structure. Should carrier and airwing OPTEMPO increase above current levels, the net savings will be reduced.

Some items never budgeted. Some items effectively associated with the 15th carrier and 14th airwing have never been funded to the Navy's notional (i.e., planned or preferable) levels. The two most prominent examples are cruiser and destroyers, and carrier-based aircraft. Both these areas will experience shortfalls (relative to notional levels) in the 1990s. Certain kinds of munitions may constitute a third example.

Table 1

Estimates of cumulative savings
under Sec. 1223 of P.L. 100-180 (H.R. 1748):
selected methodological points a/

	GAO 1	DOD	CBO 1	GAO 2	CBO 2b	CBO 2a	GAO 3
Savings (bil. of $FY88)							
budget authority	1.105	1.3	2.0	2.624	3.9	3.9	5.144
outlays	0.950	1.1	1.9	2.598	3.3	3.7	4.925
OPTEMPO of remaining carriers and airwings remains same? b/	yes	yes	yes	yes	yes	yes	yes
"Freed up" end strength eliminated from total Navy end strength? d/	no	yes c/	no	yes and no e/	yes	yes	yes
"Freed up" carrier aircraft eliminated from Navy operations?	yes and no e/	yes and no e/	yes f/	yes and no e/	yes f/	yes f/	yes
"Freed up" carrier battlegroup ships eliminated from Navy operations?	no	no	no	no g/	no	no	no g/
Savings on indirect O&S costs included?	no	no h/	yes f/ i/	yes f/ j/	yes f/ i/	yes f/ i/	yes f/ j/

a/ Prepared by Ronald O'Rourke, Analyst in National Defense, Foreign Affairs and National Defense Division, Congressional Research Service, March 18, 1988. Sources: Written DoD, CBO, and GAO submissions, and telephone consultations.

b/ Implicit assumption.

c/ DoD, p. 2, says: "But this is not necessarily a valid assumption."

d/ DoD says about 5,000 personnel "freed up"; CBO says 8,900, including 1,550 civilian personnel.

e/ Elimination was only partial. Some assets retained and redistributed to offset shortfalls.

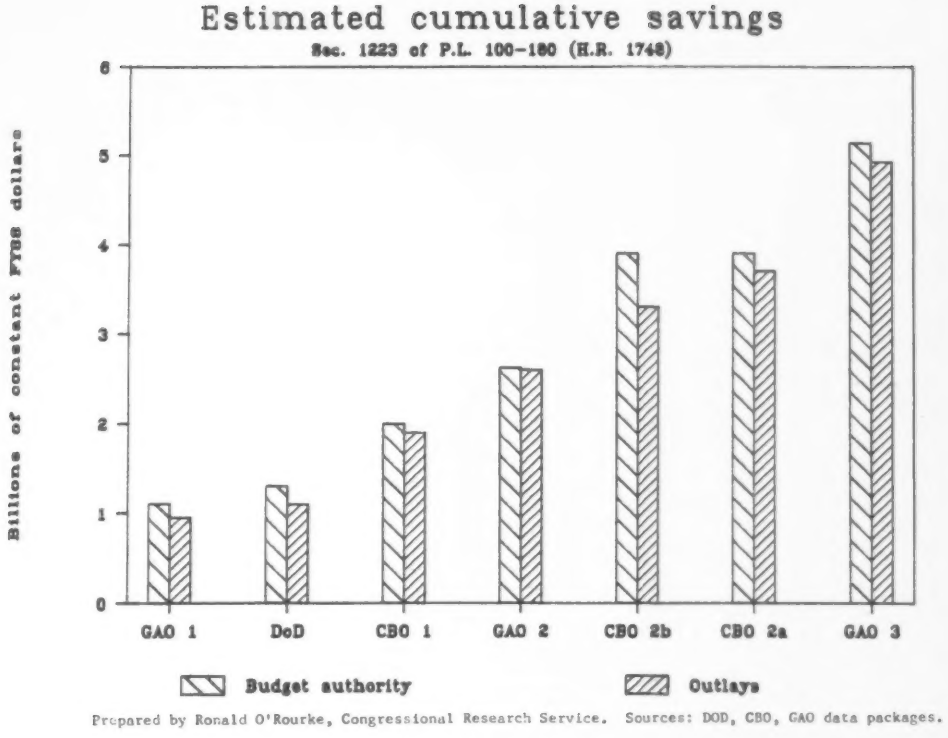
f/ The data package permits this item to be treated differently.

g/ But some FY89 ship procurements were delayed, resulting in SCN avoided procurement savings. These savings were more extensive in GAO 1 than GAO 2; the data package allows these savings (along with WPN avoided procurement savings) to be excluded.

h/ CBO, p. 2, says: "The Navy asserts that it is impossible to estimate the magnitude of savings in these areas but agrees that some savings would be possible."

i/ Indirect savings estimated on line-item basis by Defense Resources Model.

j/ Indirect savings assumed to be proportional to direct savings.



Prepared by Ronald O'Rourke, Congressional Research Service. Sources: DOD, CBO, GAO data packages.

Senator KENNEDY. We will turn to our other witnesses. We are delighted to welcome this noontime Vice Admiral Nyquist and Vice Admiral Dunn. And I would ask you to proceed in your own way.

But what I might just suggest, Senator, and I will wait until Senator Cohen comes, if we could hear from these witnesses, and then have all of them available for questions.

It seems to me, given our timeframe, we should at least get their statements into the record. And then we can conduct our own questions with whatever time that we have left.

I would hope to hold the questions until we hear from all the witnesses.

STATEMENT OF VICE ADM. R.F. DUNN, ASSISTANT CHIEF OF NAVAL OPERATIONS (AIR WARFARE), U.S. NAVY, ACCOMPANIED BY VICE ADM. JOHN W. NYQUIST, DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE), U.S. NAVY

Admiral DUNN. Yes, with your permission I will go first, Mr. Chairman.

I do appreciate the opportunity to appear in response to your March 2 letter to Mr. Carlucci. I am here to answer any questions you may have on naval aircraft and affordability.

With me, as you have indicated, is Vice Adm. John Nyquist, who will answer any questions on naval shipbuilding plans and affordability.

Upon receipt of your inquiry of October 19, 1987 on the subject of early retirement of carriers, the Navy conducted a comprehensive study which was forwarded by Mr. Weinberger on November 20.

Since then, the Navy has cooperated fully with GAO and CBO in the preparation of their studies. I have with me a copy of the Department of Defense response, which I would like to submit for the record, with your permission.

Senator KENNEDY. It will be so included.

[The information referred to follows:]

THE SECRETARY OF DEFENSE,
Washington, DC, November 20, 1987.

Hon. EDWARD M. KENNEDY,
Chairman, Subcommittee on Projection Forces and Regional Defense, Senate Armed Services Committee, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: We have conducted an in-depth study of your proposal for earlier retirement of two aircraft carriers. We conclude that our current retirement schedule optimizes national security and our defense budget.

Defense strategy, as articulated by the Unified Commanders, the Chairman of the Joint Chiefs of Staff, and supported by the President, requires 15 Carrier Battle Groups as a peacetime minimum. This is a floor, not a ceiling. This requirement is predicated on a rigorous assessment of the threat to our national security objectives. In the absence of authoritative analysis demonstrating this assessment is no longer valid, and in the face of potential reductions in strategic weapons, I cannot support initiatives that reduce and weaken our conventional naval forces.

History records the value of the aircraft carrier as an instrument of foreign policy. It has been used in more than 75% of the crises we have responded to in the last ten years. Reducing our planned force level to 14 carriers, given the requirement to repair and maintain ships when not deployed, may impair our ability to deploy in response to crises. As you know, we have made commitments to our allies and trading partners on which we can ill afford to renege. Our current force of 14 carriers does not enable us to meet all of these commitments as fully as we should. To cover the critical areas of the world we must keep five carriers deployed. It takes three CVs to keep one deployed (i.e., one is in maintenance or repair and the other is in training preparing to replace the deployed CV).

The retirement schedule you propose would reduce our planned carrier force requirement from 15 to 14 through the year 1997. There is no evidence indicating that our commitments will decrease during this time. In fact, low intensity conflict contingencies requiring conventional military force projection are likely to increase. This will require that we maintain, if not increase, aircraft carrier operational tempo through the years ahead, which is already beginning to have adverse effects upon our sailors, airmen, and equipment. The short term result of reducing the number of carriers would be a steady decline in readiness; the long term impact would be an ever-increasing toll on our sailors and their equipment.

The Chairman of the Joint Chiefs of Staff has indicated that there is no substitute for an aircraft carrier. No other combination of ships and aircraft brings to the task the ability to project power and provide air dominance where needed. We have always known this, but recently it has become increasingly evident as our basing rights throughout the world continue to diminish. No substitute makes the statement of resolve and committed presence that a carrier does. A Battleship Battle Group can complement a Carrier Battle Group, but it cannot substitute for it.

The U.S.S. *Midway*, because of her forward deployed status, provides a peacetime force multiplier. She is essentially always on station in the Western Pacific and available for a quick response. When *Midway* is brought home from Japan, plans are to replace her with a *Forrestal* class carrier. Your proposal would accelerate the costs related to this planned change.

Finally, with respect to your question on our planned new carrier status, our long range plan to solve the block obsolescence of the entire *Forrestal* class is to build a new CVN every three years.

In summary, although the findings of our study show that your proposal would result in some near term savings, the ultimate cost, both in dollars and severe—indeed unacceptable—slashes in our warfighting and deterrence capabilities would

negate any of these short term so-called "savings". We are unequivocally opposed to any proposal of this type.

Sincerely,

CASPAR W. WEINBERGER.

Enclosure.

KENNEDY STUDY REQUIREMENTS

"The study shall determine the following implications:

"(1) The total direct and indirect outlay and budget authority savings in constant fiscal year 1988 dollars through fiscal year 1997:"

Study result: The Navy estimates that direct savings resulting from the early deactivation of *Coral Sea* and *Midway* and one air wing over the period 1990 through 1997 would amount to about $1.3 billion in FY 1988 dollars. These savings would be made up of reductions in direct costs for military personnel and reductions in operating and support costs.

Indirect costs are not included in this estimate since it is almost impossible to estimate with any degree of confidence whether indirect costs would be affected and, if so, to what extent. Indirect costs are incurred by placing demands on the support infrastructure. Reducing these demands would unquestionably have some effect on support functions but they would not be immediate. Also, since the reduction of these carriers from the active inventory only reduces the 15 CV force until 1997, indirect cost savings, if measurable at all, would be of such a short duration as to be negligible.

The potential cost savings is principally O&MN and MPN related. Therefore, the budget authority of $1.3 billion would result in reductions in outlays of about $1.1 billion.

"(2) The effect on naval aircraft requirements through fiscal year 1997 assuming the aircraft from the deactivated wing are reassigned in the active force:"

Study result: The Navy currently has sufficient numbers of aircraft to fill our 14 air wings. The problem is not numbers but the right mix of aircraft to ensure a modernized force to meet the threat. With that in mind, the Navy's current objective is to have 14 fully modernized air wings by 2004. In the interim, between now and 2004, the 14 air wings the Navy will have will be full wings but not fully modernized wings—the mix and capabilities of individual types of aircraft are the issues here, not numbers of aircraft.

If forced to go to 13 air wings during the period 1990 to 1997, the following would happen. The aircraft comprising the 14th wing would be redistributed to the other 13 wings as needed allowing retirement of older aircraft. The overall aircraft procurement plan during this period would remain the same. This would allow wing modernization to continue, ensuring a stable plan leading back to the 14 wing force structure in 1997. Newer planes entering the force from 1990 to 1997 would allow earlier retirement of aircraft over that currently planned. These retirements would include: A-7's, E-2's and entire SH-3 series.

The net result of adding newer, more capable aircraft (F/A-18's for A-7's, SH-60's for SH-3's) for older ones would reduce the average age of the 13 air wing force. There would be no savings related to aircraft as a result of interim (1990-1997) 13 air wing force structure, primarily because procurement of newer planes, under the current APN plan, would continue as we build back to 14 air wings in 1997.

"(3) The implications for Navy end strength requirements through fiscal year 1997:"

Study result: From an end strength standpoint, early deactivation of *Coral Sea* and *Midway* would free up on average about 5,000 officer and enlisted end strength for each year from FY 1990 through FY 1995. Savings are low in FY 1990 to allow for accession phasing and half manyear costs; from FY 1991-1995 the savings assume manpower managers can take advantage of lead time given to accrue full workyear savings at an average (not accession) rate; and the FY 1996 savings reflects the ramping up for the delivering carrier in FY 1997 (a full precommissioning crew, phase-in of the air wing and support ship personnel).

The savings assume that an absolute end strength reduction would occur as a result of decommissioning these carriers, and that no other changes in the Navy plan for the FY 1990-1997 timeframe would occur. But this is not necessarily a valid assumption. With current and projected carrier and other manning running well below stated requirements now, the billets and people freed up by early carrier deactivation would be needed to cover other deficiencies. Worldwide commitments are not decreasing and the Navy would argue strongly that attempting to satisfy these

commitments with 5,000 fewer people is an ill advised backward move to an earlier time of problems with morale, retention and family separation.

"(4) The effect on requirements for naval surface ship combatants and support ships through fiscal year 1997:"

Study result: The proposed alternative would not change the Navy requirements or plans for surface combatants, combat logistics, or support ships through 1997. This is because:

Most of the ships in the current shipbuilding plan are force sustainers, not force builders.

The roles of these ships are not limited to carrier battle group operations and they are needed to replace ships in the current fleet as they reach the end of their useful service lives.

The Navy's most severe force structure shortfall is in anti-air warfare combatants. Even if the Navy is able to execute the current plan for surface combatants fully, that plan will not achieve inventory objectives until after 1997—at a time when even the CV force level alternative proposed here is back at the 15 CV level. There are similar shortfalls in combat logistics ships, particularly in AOE's. In the category of support ships and other auxiliaries, current inventory levels, with few exceptions, meet our force objectives, and our shipbuilding plan simply assures we are able to sustain these levels.

In summary, procurement rates in the current SCN plan are predicated upon building to inventory objectives where current shortfalls exist, particularly in the surface combatant category, and sustaining force levels by replacing older ships in those categories where current levels meet force objectives. This plan would not be changed under the proposed alternative to deactivate *Coral Sea* and *Midway* sooner because under either the proposed alternative or the Navy's own deactivation plan, the overall shipbuilding program does not meet our current force level objectives until after 1997. Until that time, the carrier's power projection, survivability, and air cover make up for some of the shortfalls in other surface forces. Reducing CV levels below the 15 currently planned further exacerbates these shorfalls and degrades our ability to carry out the maritime strategy.

"(5) The cost and feasibility of making available to the active naval fleet for operation during a time of national emergency—

(A) An aircraft carrier that is in the Service Life Extension Program (SLEP); and

(B) An aircraft carrier that has been decommissioned but is still under the jurisdiction of the Navy."

Study results: At the time of the order to reactivate a carrier undergoing SLEP, assuming that the maximum point of material rip out had been reached, it would take approximately 12 months and an incremental cost of $100 million to bring the carrier back on line. This emergency reactivation would not provide for a substantial amount of the modernization planned for the SLEP due to long lead time material shortages that would certainly exist at the time of reactivation.

If the Navy were forced to reduce the carrier force strength from 15 to 14 for the period 1990 to 1997 when it had planned on having 15, the carrier deactivated would be laid up in such a way as to minimize the time required to return it to full warfighting capability. This deactivation would, therefore, include an extensive repair package estimated to cost about $150 million. This investment on the front end would allow the ship to be brought out on an emergency wartime basis with an additional $150 million investment at that time to upgrade communications and combat systems. Under this scenario the crew would be ordered aboard immediately from the active shore establishment and the total time required to reactivate the ship, upgrade systems and train the crew for war would be 9-12 months.

THE SECRETARY OF DEFENSE,
Washington, DC, March 23, 1988.

Hon. EDWARD M. KENNEDY,
Chairman, Subcommittee on Projection Forces and Regional Defense, Senate Armed Services Committee, Washington, DC.

DEAR MR. CHAIRMAN: This is in reply to your March 2, 1988, letter, which requested an assessment from the Chairman, Joint Chiefs of Staff, on the warfighting impact of retiring two carriers earlier than scheduled. The Joint Staff has reviewed the early retirement proposal for the Chairman. This review concluded that the Navy's current retirement schedule results in the force structure that most closely provides the assessed requirements of the combatant commanders. Background information and the Chairman's assessment of carrier battle group requirements follow:

a. Navy force structure planning is based on providing the requisite warfighting capability to execute the commander in chiefs' (CINs') war plans with acceptable risk. The national requirement for carrier battle groups to support these plans with minimum risk is a classified number, well in excess of 15. Numerous Joint Staff and Service studies and analyses, as well as war gaming results, have shown that 15 is the minimum number that prudent risk will allow.

b. In a global conflict with less than 15 deployable carrier battle groups, we would be hard-pressed to challenge Soviet sea denial zones and maintain essential communications lines to allies in Europe and Asia. Force-on-force gaming results indicate that if all of the planned 15 carrier battle groups and the 4 battleship battle groups, to include all required support forces, can be brought into play—a big if—the odds are that the United States and its allies can gain ultimate control of the vital sea areas and that the United States can proceed with the necessary reinforcement and resupply of forward-deployed forces. I must reemphasize, however, the margins in the calculations are thin.

c. The British experience in the Falklands serves as a reminder that a lack of air superiority proved costly in the loss of ships and lives despite the clear advantage the British had in more sophisticated weaponry. On the other hand, an adequate complement of seaborne, manned, tactical aircraft can be quickly deployed with armament and objectives specific to the mission, threat and changing levels of engagement. These attributes were clearly demonstrated by the Navy's response in October 1985 to the *Achille Lauro* hijacking and the March/April 1986 strikes against Libya. It is that great versatility and mission effectiveness which provide the carrier-based air wing its predominant ability to meet national objectives across the broad spectrum of America's global involvement.

d. At any given time during an employment cycle, carrier battle groups are likely to be engaged in one of four activities: presence, crisis-response, exercise and training, or maintenance. Of these, presence and crisis-response govern the number, location, and duration of battle group deployments. These "commitments" are missions generated through international agreements, Presidential direction, Secretary of Defense initiatives, or Joint Chiefs of Staff and CINC-imposed requirements. Presently, we have very few hard commitments (hard being defined as written direction for specific force levels and reaction time). Most deployment force levels (primarily for crisis-response) are developed by the JCS, and CINCs, and the Services and approved by the Secretary of Defense to achieve national objectives. It should also be kept in mind that the Navy has "unquantifiable commitments" in conducting its presence and training missions. These are operations that we conduct on a regular basis to reassure our friends and allies, deter our foes, and prepare ourselves for war should deterrence fail.

e. Without corresponding reductions in peacetime global carrier commitments, the absence of *Midway* and *Coral Sea* will require that other carriers cover their commitments. The impact of this would be felt immediately, since *Coral Sea* is presently scheduled to deploy to the Mediterranean in mid-1989 and the present global carrier deployment, overhaul, and carrier Service Life Extension Program schedules would have to be adjusted. Remaining carriers would be required to deploy for longer periods of time and could expect to experience concomitant problems of safety and decreased retention, which result from stressing personnel and material beyond prudent limits. In his reply last November, Secretary Weinberger cited the importance of carrier battle groups as an instrument of foreign policy and the adverse impact that even 14 carriers has on the sailors, their families, and material readiness of battle force units. Further, our analysis has indicated that early retirement of *Midway* and *Coral Sea* will not appreciably reduce the direct operations and maintenance cost of global carrier battle group operations, since the fuel and spare parts consumption of the remaining carriers will be increased. The relatively small real savings realized would not offset the adverse impact on readiness and personnel.

f. Very few other force requirements have received the extensive study and analysis that the required number of carrier battle groups have. A 15 deployable carrier battle group Navy is the floor, not a ceiling, for required force level. I have supported this requirement in the past, do so today, and (as long as the threat and commitments are not reduced) will do so in the future. It is my belief that the requirement to achieve a 15 deployable carrier battle group Navy at the earliest opportunity remains valid and we should continue to pursue it aggressively.

The Chairman and I are in complete agreement with regard to the great value to national security represented by maintaining a viable and ready carrier force. If I can be of further assistance, please do not hesitate to let me know.

Sincerely,

FRANK CARLUCCI.

Admiral DUNN. I must underscore that the United States has a continuing need for sea power to guarantee avenues for friends and trading partners, and to create barriers to those who would thwart our peaceful pursuits. Naval aviation at sea is the keystone of that sea power.

Naval aviation provides the absolutely essential element of air dominance at sea, and over those portions of the land that can be reached from the sea.

Naval aviation enables us to capitalize on increased speed, mobility, and flexibility offered by aviation at sea. It is independent of foreign shore bases, politics, and sovereign claims of other nations.

Our national defense strategy requires far in excess of 15 carriers for wartime. Fifteen is the peacetime minimum. This gives us balance among peacetime commitments, training for war, and reasonable time at home for sailors. We will achieve 15 deployable carriers in fiscal year 1990, when the *Abraham Lincoln* is commissioned.

All of our deployable carriers, including *Coral Sea* and *Midway*, are meeting commitments today. In fact, even as we meet, *Midway* is in the Korean straits conducting joint and combined air power exercises with Korea.

Coral Sea is steaming south of the Azores en route to Norfolk after an outstanding Mediterranean cruise. Much of the time, *Coral Sea* was the only carrier in the Mediterranean, despite the fact that we have commitments to NATO to keep two carriers in the Mediterranean at all times.

Throughout her deployment, *Coral Sea*'s readiness was at an unprecedented high. In fact, she won the Commander Naval Air Force Atlantic Fleet competition, the award, for supply and aircraft intermediate maintenance excellence. And she was Commander Naval Air Force Atlantic's nominee for the Flatley Award, which is the award for the best safety performance of any ship in the Atlantic Fleet.

In addition to *Midway* and *Coral Sea*, we have the *America* and the *John F. Kennedy* operating off the Virginia Capes, the *Theodore Roosevelt* in the Caribbean, the *Eisenhower* now in the Mediterranean, and the *Enterprise* in the North Arabian Sea.

Despite continuing commitments, and because of fiscal realities, we have had to make some naval aviation force structure adjustments. We have now begun to decommission one carrier air wing.

We can still meet commitments with 13 active air wings and two reserve air wings. This equals the number of deployable carriers. It is a risk we had to take but it is an acceptable risk because we are now entering a period when ships undergoing the Service Life Extension Program, normal overhauls, and mandatory nuclear refuelings reduces the normally deployed carriers by one.

Decommissioning this air wing does save operating costs, manpower, and temporarily decreases aircraft requirements. Our long-range goal, however, does call for 14 active air wings and two reserve air wings.

I would like to state that we do agree with the CBO net assessment that there is an overall shortfall of desired Navy and Marine Corps aircraft in our inventory. The problem is not numbers of aircraft, however, as much as it is in the mix of aircraft we have.

We can afford ourselves the proper mix aboard each deploying carrier through crossdecking from carriers that are in overhaul, through shorting the numbers of aircraft in our training squadrons and in overhaul, and by using the Marine forces aboard our carriers from time to time. We do all of these things.

If we were to retire carriers early, it would have the following adverse impacts. First of all, people. And after our requirement to meet readiness, to meet national requirements, people are our number one priority. We have to retain the best.

When we dropped to 13 carriers between 1976 and 1981, we paid for it. One example was in 1980, when *Eisenhower* was at sea for 247 days of a 252 day deployment in the Indian Ocean.

To bring this closer to home, if you and I began such a cruise today, you would work 7 days a week during all of that time. You would work 12 to 16 hours a day. You would get no overtime pay.

As you saw when you visited *Midway* at Christmas, you would have virtually no conveniences or privacy as we get ashore, and you would have to do that until the end of next November. This means each of those 6,000 sailors would need to utilize an absentee ballot for the next election.

Meanwhile, Navy-wide separation questionnaires continue to point out that family separation and crisis management are the number one and two reasons for people leaving the service.

With two less carriers, national leadership would have even less flexibility in meeting short-notice national tasking. It would increase our training costs and lower our readiness to the low state we were in in the 1970s.

In addition, we need to train where we would fight. We need to train with our allies, and with our sister services. The Navy has put a great emphasis on participation in joint exercises, going from participating in roughly 40 percent of joint exercises in the 1970's to almost 70 percent in the 1980's.

We would be forced to return to much lower participation if we were required to cut two carriers. This would damage American and Allied readiness. For example, the exercise that *Midway* is participating in with Korea today would not be affordable.

Our operational tempo would be increased for the remaining carriers, which will be harder on their crews and afford less time for maintenance. It would accumulate more degradation of material condition and accelerate the aging of the ships that so sailed.

In summary, early retirement would result in some near-term savings, but it would be negated by the loss of warfighting and deterrent capability with much higher long-term expense.

There would be increased maintenance costs and the cost of recruiting and training people to replace those leaving due to family separation and exasperation would be high.

I will be glad to stand by for your questions after the other witnesses' statements. Vice Admiral Nyquist has a few remarks.

STATEMENT OF VICE ADM. JOHN W. NYQUIST

Admiral NYQUIST. Mr. Chairman and distinguished members of the committee.

I am privileged today to review our Navy shipbuilding requirements and to discuss our plans for sustaining and modernizing our naval forces in the 1990's and beyond. Mr. Chairman, with your permission, I will submit my written statement for the record.

Senator KENNEDY. It will be included in its entirety in the record.

Admiral NYQUIST. The minimum force the Navy requires to carry out our many roles within the context of the national military strategy consists of 20 to 40 ballistic missile submarines, 15 carrier battle groups, 4 battleship battle groups, 100 nuclear attack submarines, amphibious lift for the assault echelons of a Marine Expeditionary Force, and a Marine Expeditionary Brigade, 14 deployable mine countermeasure ships, 10 underway replenishment groups, and 7 convey escort groups. It is a prudent risk force.

Regrettably, the $12.3 billion reduction in TOA, which we need to accommodate in the fiscal year 1989 amended budget submission, dictated some painful reductions to our force structure.

In lieu of overhauling Poseidon SSBN's so they can be maintained as active force ships, they will be decommissioned as Trident SSBN's come on line.

The 14th air wing, as Admiral Dunn stated, will stand down until completion of the carrier Service Life Extension Program and the delivery of the replacement carriers. Ten FF–1040 class frigates and six FFG–1 class frigates are scheduled to retire earlier than previously planned. Finally, we had to reduce the number of Aegis ships to be procured in fiscal year 1989 from five to three.

Despite these reductions, we have already achieved or soon will achieve most of our force level goals. We have reached our minimum objective levels for strategic forces and attack submarines.

The fourth battleship, U.S.S. *Wisconsin,* will join the fleet next year. And the 15th aircraft carrier, U.S.S. *Abraham Lincoln,* becomes operational in 1990.

We will achieve our amphibious lift objective in the late 1990's. Our most serious deficiency is in modern battle group antiair warfare combatants. The *Arleigh Burke* class DDG–51's built in the numbers required is the solution to this shortfall.

My written statement addresses our plans for dealing with the potential for block obsolescence of our carrier forces, surface combatants, and amphibious forces as well as the other elements of the force structure.

If we start construction of one carrier every 3 years, we can sustain a 15 carrier force indefinitely, assuming a service life of 45 years. Our carrier Service Life Extension Program complements our new construction program by adding 15 years to the useful service life of our conventional carriers.

This schedule will require full funding for one additional CVN in fiscal year 1996, and one in fiscal year 1999, unless a decision is made to appropriate two carriers in 1 year in order to minimize construction costs.

Since World War II, we have averaged one carrier started about every 2½ years, reflecting a longstanding commitment to procure these carriers to maintain our maritime superiority.

As far as our surface combatants are concerned, a building rate of five to six per year, which we project to achieve in the fiscal

year 1988/1989 5 year shipbuilding plan, will enable us to attain our force level objectives for antiair warfare combatants just after the turn of the century.

By maintaining this rate in conjunction with modernization and extension of the service lives of selected ships, we will sustain our surface combatant force indefinitely.

We will achieve our objective of sufficient amphibious lift for a Marine Expeditionary Force and a Marine Expeditionary Brigade when LHD–5 joins the fleet in 1996 or 1997. Thereafter, construction of one to two amphibious ships per year will sustain our amphibious force indefinitely.

This year we are requesting authorization and appropriation of $9.13 billion for the construction of 17 new ships and the conversion of two others. This represents 9.4 percent of the Navy budget.

The real program growth projected in the outyears of the fiscal year 1988–1989 5 year shipbuilding plan will be sufficient to build an average of 20 new ships per year. This rate of construction will sustain and modernize the fleet and keep pace with the threat into the 21st century.

Mr. Chairman, that concludes my overview of our shipbuilding plans.

[The prepared statement of Admiral Nyquist follows:]

PREPARED STATEMENT OF VICE ADM. JOHN W. NYQUIST, U.S. NAVY, ASSISTANT CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

Mr. Chairman and distinguished members of the Committee, I am Vice Admiral John N. Nyquist, USN, the Assistant Chief of Naval Operations (Surface Warfare) and the sponsor for the Shipbuilding and Conversion, Navy (SCN) Appropriation.

I am privileged today to review our requirements for the 600 ship Navy and to present our plans for sustaining and modernizing our naval forces in the 1990s and beyond.

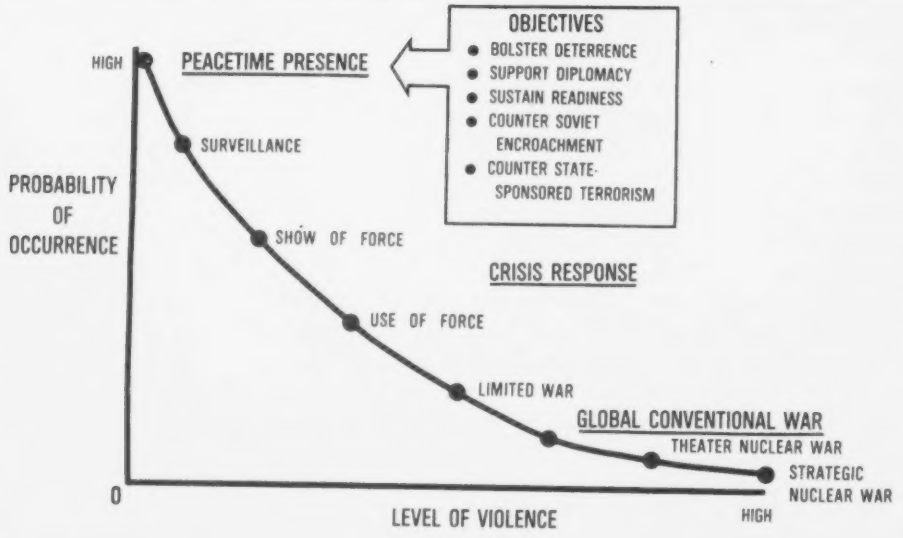
Our need for a Navy is driven by the threats to our interests as a maritime nation. Since the earliest days of the Republic, the Navy has maintained the peace, fought our enemies, and protected our security. With our rise to a global power, these interests expanded to include the protection of the entire Free World and the missions of our Navy and its size expanded accordingly.

NATIONAL MARITIME STRATEGY

The objectives of our National Maritime Strategy are to deter war and control escalation. If deterrence fails and conflict occurs, our objective then becomes war termination at the earliest possible time on terms favorable to the U.S. and our Allies. People sometimes forget that deterrence rests on our warfighting capability and cannot be separated from it.

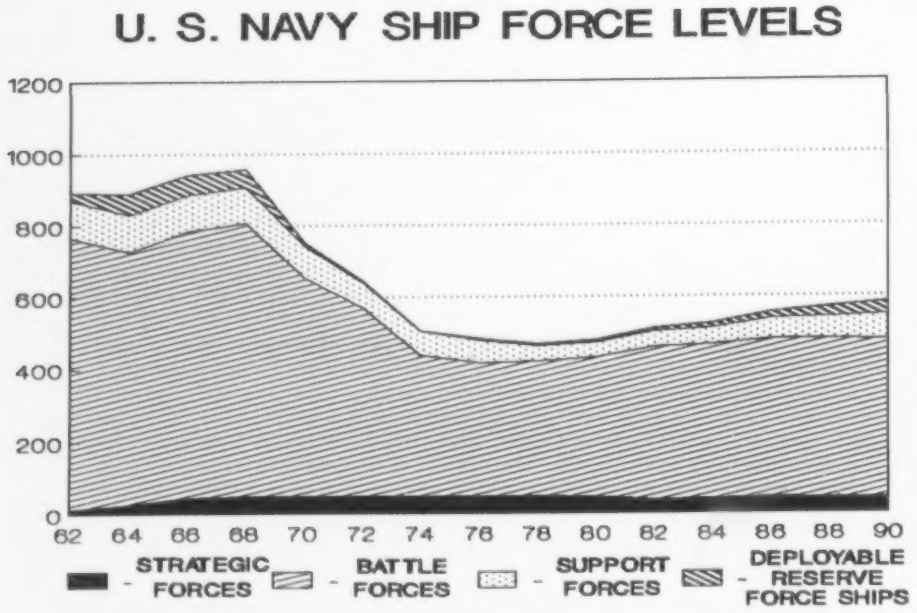
We presently have formal defense treaties with more than 40 nations, only two of which share a land border with us. In addition, there are a number of nations outside the formal alliance system with which we have common military and economic interests. The National Maritime Strategy takes these commitments and the contributions of our Allies into consideration. It provides a global framework for our force level requirements and shapes our shipbuilding program.

APPLICATIONS OF MARITIME POWER



Naval forces have important roles across the entire conflict spectrum, from overseas presence during peacetime to general war. At the low end, our peacetime operations enhance deterrence worldwide, support U.S. diplomacy, and provide for rapid response in a crisis. Naval forces have been called upon to enforce U.S. national security interests more than 200 times since the end of World War II. The highly successful escort of reflagged tankers in the Persian Gulf is but one recent example. At the high end of the spectrum, our fleet ballistic missile submarines provide the threat of global nuclear response which forms the basic underpining of our deterrent strategy.

The 600 ship Fleet which our shipbuilding program is designed to sustain is the minimum force we need to carry out our many roles within the context of the Maritime Strategy. It is a prudent risk force.



NAVAL FORCE LEVELS

This viewgraph depicts the overall size of the Navy since 1962. There was a slight build up in force levels during the Vietnam era and a precipitous drop thereafter. This decline continued through the late 1970s. By the end of FY 1978, the Fleet had been reduced to 479 ships. Since then, the trend has been upward. With your support, the Fleet has grown to 568 ships at the beginning of this fiscal year. We expect to achieve 600 ships by the late 1990s.

600 SHIP FLEET COMPOSITION

- 20-40 BALLISTIC MISSILE SUBMARINES
- 15 CARRIER BATTLE GROUPS
- 4 BATTLESHIP BATTLE GROUPS
- 100 ATTACK SUBMARINES
- MEF-PLUS-MEB ASSAULT ECHELON LIFT
- 14 MINE COUNTERMEASURES SHIPS
- 10 UNDERWAY REPLENISHMENT GROUPS
- 7 CONVOY ESCORT GROUPS

THE 600 SHIP FLEET

Our current naval force level objectives are summarized on this viewgraph: 20 to 40 Ballistic Missile Submarines,[1] 15 Carrier Battlegroups, 4 Battleship Battlegroups, 100 Nuclear Attack Submarines, Amphibious lift for the assault echelons of a Marine Expeditionary Force (MEF) and a Marine Expeditionary Brigade (MEB), 14 Deployable Mine Countermeasures Ships, 10 Underway Replenishment Groups, and 7 Convoy Escort Groups.

[1] The force level goal for stragetic submarines is under review. The eventual force level will depend on arms reductions agreements and other factors.

THE NAVY'S FORCE STRUCTURE GOALS

	GOAL	END FY 88	END FY 89
SSBNs*	20-40	37	37
Deployable Aircraft Carriers	15	14	14
Battleships	4	3	4
AAW Cruisers/Destroyers	100	75	77
ASW Destroyers	37	32	32
Frigates	101	107	100
Attack Submarines	100	101	103
Mine Countermeasures Ships	14	6	9
Amphibious Ships (MEF & MEB)	75	64	67
Patrol Combatants	6	6	6
Combat Logistics Ships	65	58	60
Support Ships and Auxiliaries	60-65	67	71
Total	**600 (approx.)**	**570**	**580**

* The force level goal for strategic submarines is under review. The eventual force level will depend on arms reductions agreements and other factors.

Our goals for aircraft carriers, battleships, and nuclear attack submarines will soon be achieved. The 4th Battleship, U.S.S. *Wisconsin* (BB 64), will join the Fleet next year and the 15th aircraft carrier, U.S.S. *Abraham Lincoln* (CVN 72), becomes operational in 1990. We expect to achieve our amphibious lift objective in the late 1990s. Our most serious deficiency is in modern Battlegroup AAW combatants. The *Arleigh Burke* Class DDG 51 program is the solution to this shortfall. Unless we get relief from fiscal constraints, the achievement of our objective level for these ships will be delayed for at least a decade.

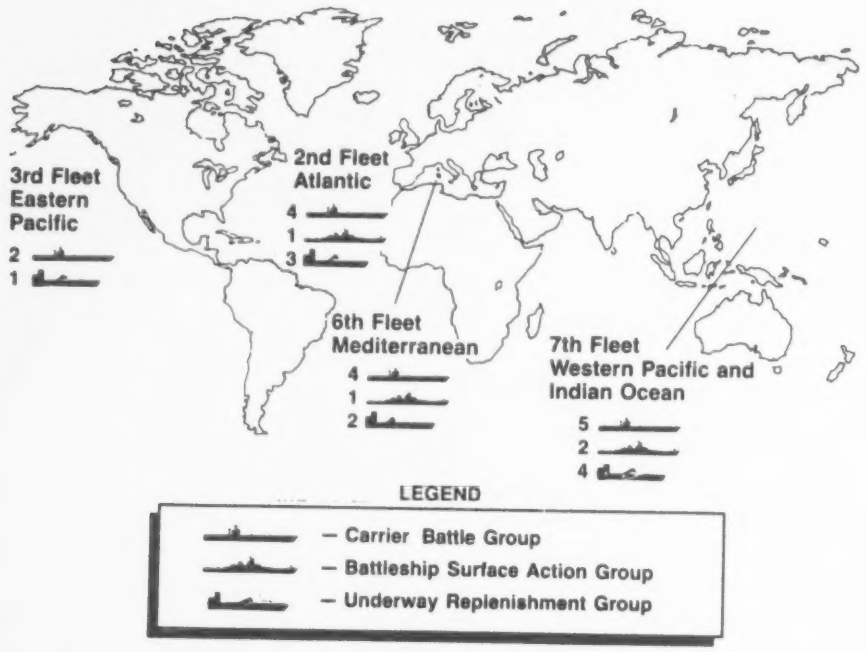
CV BATTLE FORCE COMPOSITION

NOTIONAL BATTLE FORCES

PEACETIME	WARTIME
1 CV/CVN	2-4 CV/CVN
1-2 CG/CGN	4-8 CG/CGN
2-3 DDG	4-8 DDG
2-3 DD	4-8 DD
1-3 SSN	3-4 SSN

This viewgraph shows a national composition of a Carrier Battlegroup. The actual composition depends upon the threat, the task to be performed, and the availability of forces, including those of our sister services and our Allies.

MINIMUM WARTIME GLOBAL OPERATIONAL REQUIREMENTS



The national wartime disposition of our Battlegroups would be:
6th Fleet—Mediterranean—4 CVBG, 1 BBBG.
2nd Fleet—Atlantic—4 CVBG, 1 BBBG.
7th Fleet—Western Pacific/IO—5 CVBG, 2 BBBG.
3rd Fleet—Eastern Pacific—2 CVBG.

During peacetime, about one third of our forces would be forward deployed on a day-to-day basis. The balance of our forces would be training in local operating areas in preparation for deployment or undergoing overhaul, upkeep, and maintenance.

STRATEGIC SUBMARINE FORCE

We presently have 37 strategic submarines in the force, including 29 submarines of the *Lafayette, James Madison,* and *Benjamin Franklin* Classes and eight Trident I C-4 configured *Ohio* Class submarines. Twelve ships of the earlier classes have been converted to carry the Trident I missile. The SSBNs constitute the most secure element of our strategic triad and are the cornerstone of our deterrent strategy. Their survivability under all conditions of war initiation promotes stability in a crisis and their endurance provides for control of escalation in a conflict.

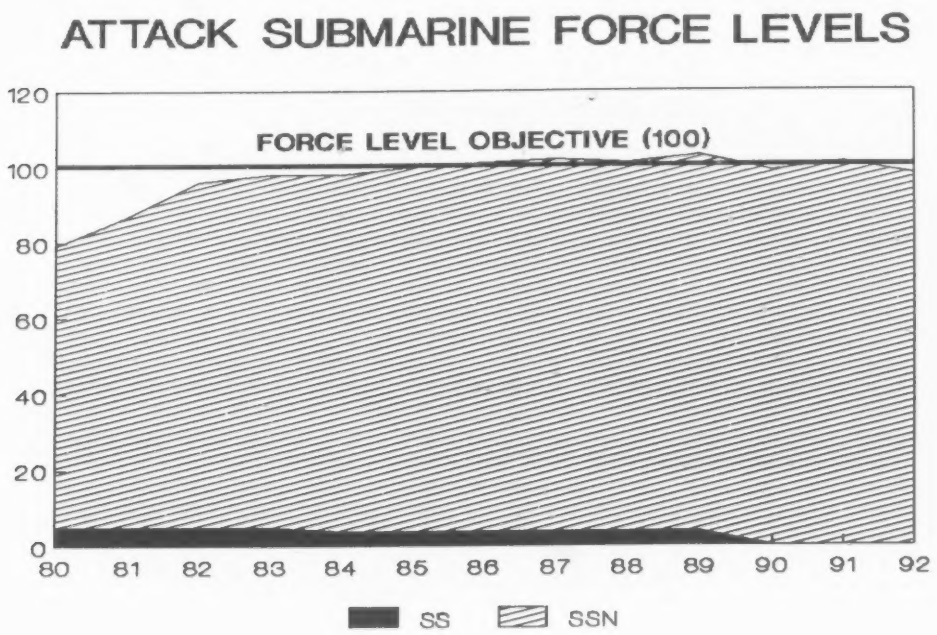
Based on a 30 year service life, our building rate of one SSBN per year will sustain the force indefinitely.

ATTACK SUBMARINE FORCE

The Soviet Union has the largest attack submarine force in the world. Soviet submarines are being built at a rate which is more than double that of the U.S. Moreover, the overall quality of this force is improving rapidly, as quieter and more powerful new classes are introduced in large numbers. Four new classes have achieved initial operational capability in the past six years.

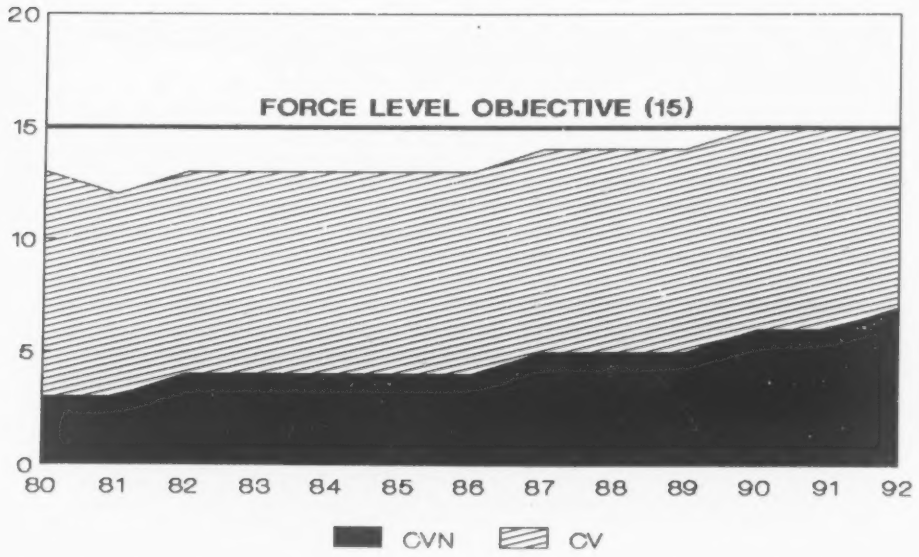
Countering this formidable threat is the primary mission of our attack submarines. The present force level objective is 100 nuclear attack submarines. There are currently four conventional and 98 nuclear attack submarines in the Force. Of these, 37 are *Los Angeles* (SSN 688) Class submarines. Twenty-two additional units of this class have been authorized and appropriated through 1988 and seven others are programmed in the next four years.

We are requesting approval of the lead U.S.S. *Seawolf* (SSN 21) Class submarine this year in order to maintain our qualitative lead over the Soviet submarine force well into the 21st century.



We need to maintain an average annual building rate of 3–4 nuclear attack submarines in order to sustain the force.

DEPLOYABLE AIRCRAFT CARRIERS



Our aircraft carriers are deployed worldwide in support of our national commitments. They are capable of executing response options ranging from peacetime presence through general war. Together with their embarked air wings, the carriers have vital roles in strike, anti-surface, anti-air, and anti-submarine warfare across the full conflict spectrum.

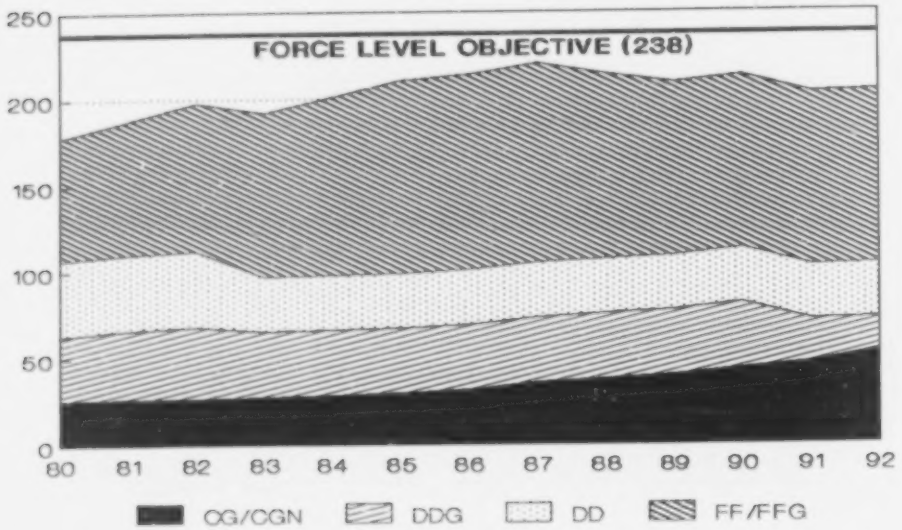
Last year, the Congress appropriated full funding for two *Nimitz* Class nuclear aircraft carriers, CVN 74 and CVN 75. Two other CVNs approved in FY 1983 are building at Newport News Shipbuilding and Drydock Company. When the first of these, U.S.S. *Abraham Lincoln* (CVN 72), joins the Fleet in 1990, we will reach our force level objective of 15 deployable aircraft carriers. CVN 73, 74, and 75 will replace conventionally powered carriers as they retire in the 1990s.

One conventional carrier, U.S.S. *Independence* (CV 62), is completing the CV Service Life Extension Program (SLEP) at Philadelphia Naval Shipyard and will join the Fleet this year. U.S.S. *Kitty Hawk* (CV 63) is just beginning SLEP. This program will add 15 years to the service lives of our conventional carriers.

Since World War II we have averaged one carrier start every 2.38 years. Based on an average service life of 45 years, we now plan to begin construction of one CVN every three years to sustain our carrier force indefinitely.

This schedule will require full funding for one addition CVN in FY 1996 and one in FY 1999, unless a decision is made to appropriate two carriers in one year in order to minimize construction costs.

SURFACE COMBATANT FORCE LEVELS



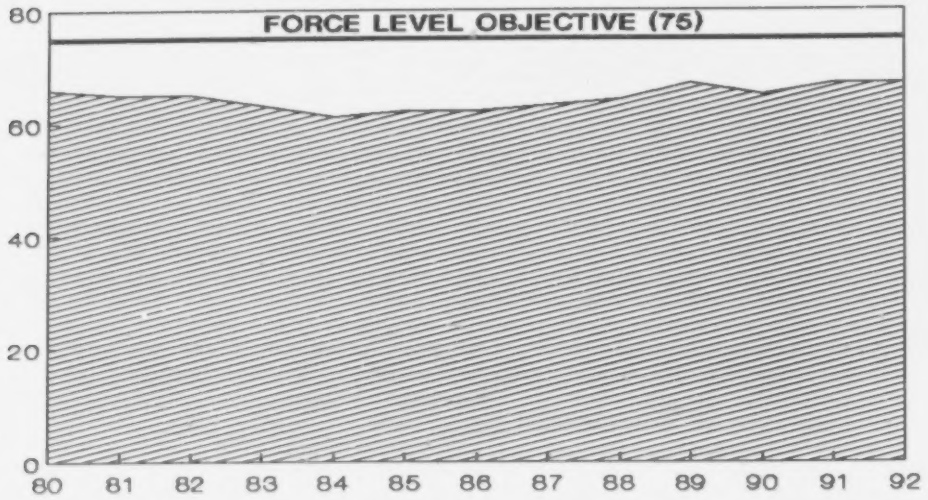
We have made great strides in the past few years in improving the quality of our surface combatants, although fiscal constraints have precluded solving our numerical shortfalls. The AEGIS Combat System and Vertical Launch System (VLS) have revolutionized battle management in the Battlegroup. The combination of Harpoon and Tomahawk has expanded the roles of our surface combatants, complicated enemy targeting, and significantly increased the Navy's offensive power. Our approved surface force level objectives are: four reactivated battleships, 100 Battle Force AAW combatants, 37 destroyers, and 101 frigates. We regularly review these force level requirements in the context of our Maritime Strategy as the threat evolves.

Last year, the Congress approved the last five of our CG 47 *Ticonderoga* Class cruisers, bringing to 27 the total number of these highly capable ships which have been authorized and funded. Ten are already on duty with the Fleet.

Presently, our most severe force structure deficiency is in guided missile destroyers. Unfortunately, the stretch out of the DDG 51 *Arleigh Burke* Class destroyer program will exacerbate this shortfall.

We need 29 *Arleigh Burke* Class guided missile destroyers to replace the aging DDG 2 and DDG 37 Class destroyers which are becoming obsolescent and will be retired in the 1990s. As the DDG 51 program ramps up to six per year, we will begin to replace our older cruisers and move toward our long established Battlegroup AAW combatant force level objective.

AMPHIBIOUS SHIP FORCE LEVELS

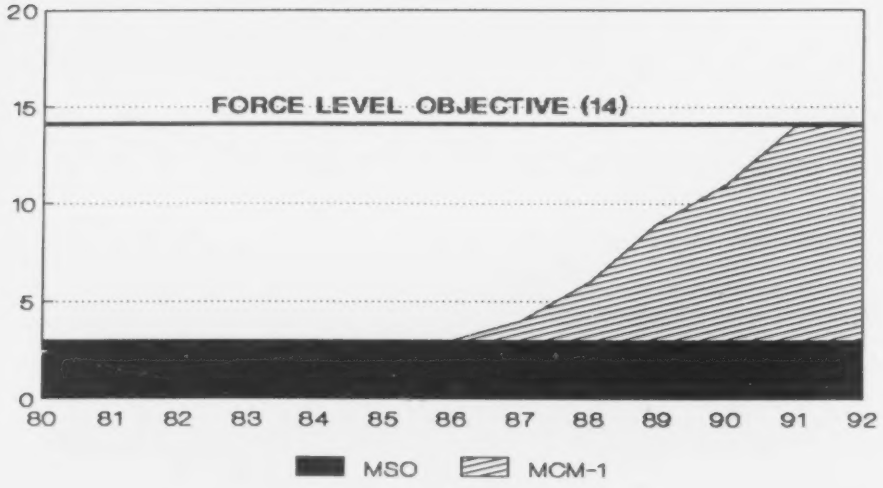


Amphibious Warfare was developed and perfected by the Navy and Marine Corps prior to and during World War II, employing forces uniquely fashioned for forcible entry.

In developing plans to expand the Navy and revitalize our maritime strength, we concluded that we had to increase our amphibious lift, and correct deficiencies in systems and equipment which support amphibious operations. Our initiatives are designed to achieve a balance in tactical air, naval surface fire support, amphibious forces, CH-53E helicopters, assault craft, sealift, prepositioning, cargo handling and off-loading equipment, and increases in ordnance and supplies.

The primary factors in determining the Amphibious Force level and ship design are the Marine Corps lift requirement and the ship to shore assets required to execute the landings. The stated goal is the capability to lift the Assault Echelons of both a Marine Expeditionary Force (MEF) and a Marine Expeditionary Brigade (MEB). We expect to attain our amphibious lift objective in the late 1990s.

DEPLOYABLE MINE COUNTERMEASURES SHIP FORCE LEVELS

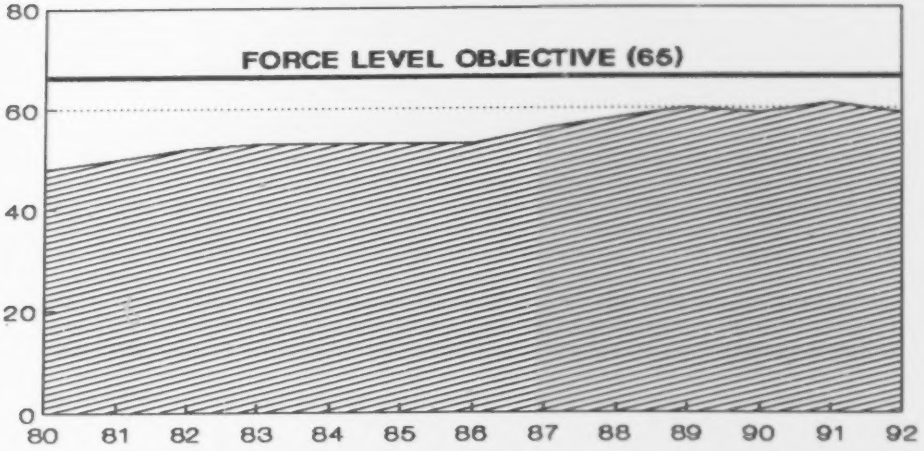


The Soviet Union possesses the world's largest offensive mining capability. In the event of war, mines could be employed to deny use of harbors, straits, and coastal waters, thereby jeopardizing the importation of strategic materials and the reinforcement and resupply of U.S. and allied forces in Europe and Asia. The laying of mines in the Persian Gulf by the Government of Iran is the most recent example of how even a modest mining effort can threaten to strangle vital shipping lanes.

For many years, our mine countermeasures capability was inadequate to meet the threat. Our oceangoing minesweepers are approaching obsolescence and are increasingly difficult and expensive to maintain. We have established a minimum objective of 31 new mine countermeasures units which, in conjunction with our MCM helicopters, will have the mission of clearing U.S. waters and strategic choke points in time of war. Current plans call for the construction of 14 *Avenger* MCM 1 Class ships and 17 MHC 51 Class coastal minehunters. The MHC 51 is a new class of ships designed to perform reconnaissance, classification, and neutralization of moored and bottom mines in our harbors and coastal waters.

An average of one new mine countermeasures ship each year will sustain the force indefinitely. We expect to build 3 MCM 1 Class ship and 12 MHC 51 Class ships over the period FY 1988–1992.

COMBAT LOGISTICS SHIP FORCE LEVELS



The expanding Fleet requires additional Combat Logistics Forces. Combat Logistics Force ships include multi-product station ships with the speed and armament to remain with the Carrier Battlegroups and single product shuttle ships to carry fuel, ordnance, stores, and provisions from advance logistic bases or consolidation points at sea. Our primary station ship is the AOE fast combat support ship. Shuttle ships include fleet oilers (AOs/TAOs), ammunition ships (AEs/TAEs), and stores ships (AFS/TAFS). In the event of nonavailability of an AOE, one AOR and one AE may be assigned to a Battlegroup. Recent concerns over availability of overseas bases have underscored our dependence on these ships to keep our battle forces operating.

We already have our required number of AFS/TAFS in the force. The balance of our TAOs/AOs are under construction or are programmed over the next four years.

We plan to construct an average of 2.4 Combat Logistics Ships per year over the period FY 1988–1992. This is above the average of 1.5 ships we need to build each year to sustain and modernize the Combat Logistics Forces. This building rate compensates for previous neglect. More AOE 6 fast combat support ships are being built to attain our objective of one AOE per battlegroup. We also plan to begin construction of a new class of ammunition ships, the AE 36, in FY 1991.

SUPPORT SHIPS AND AUXILIARIES

We have essentially attained our force level objective for support ships and auxiliaries. These include tenders, repair ships, salvage ships, fleet tugs, and ocean surveillance ships which operate in support of our Battle Forces. We need to build an average of 1.6 to 3.0 of these types each year to sustain the force indefinitely. We plan to build a total of 16 support ships and auxiliaries over the period of FY 1988–1992.

FY 88/89 SCN PLAN
CONGRESSIONAL SUBMISSION
(QTY/$M TOA)

NEW CONSTRUCTION	FY-88	FY-89
TRIDENT	1/1,260.8	1/1,368.1
CVN 68	2/6,325.0	—
SSN 688	3/1,676.9	2/1,493.6
SSN 21	257.6	1/1,488.0
CG 47	5/4,127.0	—
DDG 51	5.5	3/2,207.3
LHD 1	1/752.9	1/737.5
LSD 41 (CV)	1/258.0	—
MCM 1	—	—
MHC 51	—	2/197.2
TAO 187	2/256.4	2/284.9
TAGOS 19	—	3/159.6
AE 36	—	—
AOE 6	—	1/363.9
ARS 51	—	—
TAGS	—	1/74.0
LCAC	36.5	(9)/192.6
CONVERSIONS		
CV SLEP	1/729.8	135.4
AO (JUMBO C)	1/44.1	2/84.9
TACS (C)	2/53.1	—
OTHER		
SERVICE CRAFT	12.5	—
LANDING CRAFT	—	—
STRAT SEALIFT	43.4	—
SEALIFT ENHANCE	—	—
OUTFITTING	183.9	214.7
POST DELIVERY	132.0	128.4
TOTAL	16,155.4	9,130.1
SHIP COUNT NC/C	15/4	17/2

This year we are requesting authorization and appropriation of $9.13 billion for the construction of 17 new ships and the conversion of two others. This represents 9.4 percent of the Navy budget.

The real program growth projected in the outyears of the FY 1988/1989 Five Year Shipbuilding Plan will be sufficient to build an average of 20 new ships per year. This rate of construction will sustain and modernize the Fleet and keep pace with the threat into the 21st century.

Mr. Chairman, that concludes my overview of the 600 ship Fleet and our shipbuiling plans. I would be happy to answer any questions you might have.

Senator KENNEDY. Mr. Hale and Mr. Thurman.

STATEMENT OF ROBERT F. HALE, ASSISTANT DIRECTOR, NATIONAL SECURITY DIVISION, CONGRESSIONAL BUDGET OFFICE

Mr. HALE. Thank you, Mr. Chairman. I appreciate the opportunity to testify today about the early retirement of carriers. Like the other witnesses, I have a statement for the record. I will give you a brief oral summary.

The CBO analysis done last year for the full committee indicated that the Navy, based on its own requirements and other planning factors, was short of combat aircraft. The shortage suggests the Navy would not have enough planes to utilize fully all of its aircraft carriers, particularly in wartime.

Changes proposed in this year's budget leave the Navy with the same number of carriers, but with one less air wing, and a continuing shortfall of aircraft, which may heighten the utilization concerns.

As my testimony will show, retiring an aircraft carrier earlier than now planned would permit fuller utilization of remaining carriers and make the number of carriers and wings equal. Early retirement would also save money.

But there are other solutions, as Senator McCain suggested. The Congress could allow the Navy to buy more aircraft. It could maintain the current plan for numbers of carriers and decide to accept the risk that all of them would not be fully utilized.

Let me very briefly discuss the changes in the plans, the Navy plans, since last year that bear on this issue. As you know, the Navy said it expects to delay its goal of achieving 600 ships, but it still plans to build up from 15 total carriers to 16 in 1990, one of which would be in long-term overhaul. So we would have 15 deployable carriers in 1990 and beyond.

The Navy expects to reduce the total number of air wings from 16 to 15 this year, and has not indicated when it would again have 16 wings. So after 1990, they will have one less wing than they would have carriers.

They are also reducing procurement of aircraft. There is a table on page 3 of my prepared statement that shows you the numbers relative to last year's plan. In 1988 to 1992, they are planning to buy 150 fewer aircraft. Of that number, 114 will be due to cancellation of the A-6F program.

Now, how does this latest plan affect utilization of carriers? This year's plan, as I have said, calls for one fewer wings than carriers. The Navy argues, as you heard, that this difference between wings and carriers is temporary and acceptable, because they will have

85-712 - 88 - 2

one more carrier in overhaul. That means in the 1990's, they would presumably only have 14 carriers readily deployable.

History suggests, however, that defense planners have not been comfortable with such a plan in the past. At least since 1970, the Navy has never had fewer wings than carriers. In fact, in many years it has had more wings than carriers.

In addition to having fewer wings than carriers, the Navy will have a shortfall of combat aircraft—that is, its requirements will exceed its planned inventory. Removal of an air wing in this year's plan does cut requirements by 130 aircraft. So everything else being equal, they would have reduced the shortfall. On the other hand, they have reduced planned procurements, as I have said, by 150 planes. So we estimate that they would have a shortfall of about 190 combat aircraft in 1994. And meeting that shortfall could require spending an additional $6.2 billion on aircraft procurement.

The shortfall, and the cost to meet it, would be a lot larger if they put that air wing back. They have said its deletion is temporary. If they restore it, then that drives up the shortfall to about 320 aircraft.

Now, in testimony last year, and again as Admiral Dunn has reiterated, the Navy has acknowledged shortfalls. It has supplied CBO with planning factors roughly consistent with the Navy's estimates. We have used these same factors in calculating the shortfalls I have given you today.

Of course, the Navy could alter its planning factors. But any significant alterations they might make—for example, retiring the older aircraft later—would have some adverse operational implications. They also are bringing on a new aircraft, the advanced tactical aircraft, or A–12. The details of that program are not publicly available. But if procurement of the A–12 follows the past patterns for new aircraft, by 1994 numbers of A–12's in the inventory would reduce the shortfall to about 160 aircraft.

What are the implications of these shortfalls in combat aircraft? They are certainly not a complete measure of carrier capability. Such a measure would have to consider the number of carriers and the capability of embarked aircraft. Shortfalls are probably best viewed as a measure of how fully we are utilizing aircraft carriers. And by that measure, the Navy shortfall of 190 planes is 5 percent of its total combat inventory. Viewed another way, the 1994 shortfall of those aircraft that are usually based on carriers is about the equivalent of an air wing and its supporting aircraft.

The Navy argues these shortfalls will not result in carriers being deployed in peacetime without their full complement of aircraft. They will crossdeck planes, as you heard Admiral Dunn say, taking them from a returning ship and put them on one about to deploy.

These accommodations may, however, reduce defense capabilities, and that is particularly true in wartime. In wartime, the Navy would want to deploy immediately many units that in peacetime are in workup for deployment.

So the shortfalls that can be accommodated by crossdecking in peacetime may lead to units deploying without all their aircraft in wartime. And of course the Navy would not have as many spare planes to replace those damaged in combat.

Now, the shortfalls are not limited to aircraft. We have estimated that by the turn of the century the Navy would be short some 22 carrier escorts, and more in the intervening years, mainly cruisers and destroyers. Those shortfalls could cause problems in defending the carrier battle groups. Relative to last year's plans, the added costs to meet the ship shortfall would total $15 billion.

Retiring an aircraft carrier would restore the equality between numbers of carriers and wings, or if accompanied by retirement of an air wing it would reduce the aircraft shortfall. Retiring a carrier would also save money. We have made estimates at your request, Mr. Chairman, and based on your amendment, of what retiring a carrier would involve. And they are up there on the board.

(Chart found in CRS statement.)

Over a 10-year period they would range from $0.9 billion to $3.9 billion, expressed in today's dollars of budget authority. The details are in Attachment B to my statement.

The range reflects a lot of assumptions about what the Navy might do after it retires the carriers. I think you are going to hear a fair bit more about them from GAO, so I am not going to repeat them. They are summarized at the bottom of page 10 of my statement. And you indeed listed them in your opening remarks.

In conclusion, Mr. Chairman, retiring aircraft carriers earlier than planned would clearly reduce costs. It would also restore equality between the number of wings and carriers, or, if it was accompanied by further reduction in air wings, it would reduce aircraft shortfalls.

By those measures, retiring carriers would mean fuller utilization of the remaining vessels. On the other hand, it would mean fewer aircraft carriers available to be deployed in peace or war. And these are the disadvantages and advantages that you have to weigh in deciding how many carriers the Navy should have.

After you have heard all of the witnesses, I would be glad to answer any questions.

[The prepared statement of Mr. Hale follows:]

Statement of
Robert F. Hale
Assistant Director
National Security Division
Congressional Budget Office

Mr. Chairman, I appreciate the opportunity to testify today about the early retirement of Navy aircraft carriers. Last year, the Congressional Budget Office (CBO) issued a report to the full committee titled Navy Combat Aircraft: Issues and Options. The report indicated that the Navy, based on its own requirements and other planning factors, was short of combat aircraft. This shortage suggests that the Navy would not have enough planes to utilize fully all of its aircraft carriers, particularly in wartime. Changes proposed in this year's budget leave the Navy with the same number of carriers but with one less air wing and a continuing shortfall of aircraft, which may heighten concerns over utilization.

As my testimony will show, retiring an aircraft carrier earlier than now planned would permit fuller utilization of remaining carriers and would make the number of carriers and wings equal. Early retirement would also save money. But there are other solutions. The Congress could allow the Navy to buy more aircraft. Or it could maintain the current plan for the same number of carriers and accept the risk that they would not all be fully utilized.

CHANGES IN NAVY PLANS

In its latest budget plan, the Navy has said it expects to attain its goal of 600 ships slightly later than it anticipated earlier, as a result of the retirement of 16 frigates. However, the Navy still apparently expects to build from an inventory of 15 aircraft carriers today to a total of 16 carriers by 1990. (Since the services are still working out a detailed five-year plan consistent with the latest budget projections, Navy plans beyond 1989 are

uncertain.) One of these carriers would be in long-term overhaul--called the "slep" or service life extention program--leaving 15 deployable carriers (see Table 1).

TABLE 1. CARRIER AND AIR WING FORCE STRUCTURE: THE ADMINISTRATION'S PLANS FOR 1988 AND 1989

	1988	1989	1990	1991	1992
Aircraft Carriers					
Administration 1988 plan	15	15	16	16	16
Administration 1989 plan	15	15	16	16	16
Difference	0	0	0	0	0
Carrier Air Wings					
Administration 1988 plan	16	16	16	16	16
Administration 1989 plan	15	15	15	15	15
Difference	(1)	(1)	(1)	(1)	(1)

SOURCE: Congressional Budget Office estimates based on data in Department of Defense, Annual Report to Congress, Fiscal Years 1988 and 1989, and in Navy testimony before the Subcommittee on Procurement and Military Nuclear Systems, Committee on Armed Services, U.S. House of Representatives, March 16, 1988.

While maintaining carrier plans, the Navy expects to reduce the number of active air wings from 14 to 13 this year and has not indicated when it might again have 14 wings. (An air wing, which is the unit that would normally be deployed on a carrier, usually consists of 80 to 90 aircraft plus backups.) The Navy will still have two wings in its reserve forces, making a total of 15 wings available in time of war instead of the 16 wings available last year. This sixteenth wing had been partially established in 1987 when Administration plans changed.

The effects of this force reduction are difficult to assess. Some of the Navy wings associated with last year's plan did not have their full complement of aircraft. Thus, even though it is removing a wing, between

1988 and 1989, the Navy actually plans to add planes to its force structure in order to meet more fully the requirements of its remaining wings.

Naval aircraft procurement was also reduced in this latest budget. As Table 2 shows, last year's plans for procurement during the 1988-1992 period have been reduced by about 150 aircraft. The largest reduction—114 planes--resulted from the cancellation of the A-6F aircraft program.

TABLE 2. CHANGES IN AIRCRAFT PROCUREMENT BETWEEN 1988 AND 1989

System	1988	1989	1990	1991	1992	1988-1992
A-6E/F	(12)	(18)	(24)	(24)	(36)	(114)
EA-6B	6	0	0	0	0	6
AV-8B	(8)	(8)	9	9	(15)	(13)
CH-53E	0	0	(4)	0	0	(4)
AH-1W	12	(12)	0	0	0	0
LRAACA a/	0	0	(2)	(18)	(7)	(27)
Total	(2)	(38)	(21)	(33)	(58)	(152)

SOURCE: Congressional Budget Office estimates from Department of the Navy, Highlights of the Department of the Navy Budget (1988 and 1989).

a. Long-Range Air Antisubmarine Warfare Capable Aircraft.

Match Between Wings and Carriers

This year's plan for naval aircraft departs from recent plans in an important way: it calls for more carriers than air wings. The current Navy plan anticipates a total of 16 carriers and 15 air wings by 1990. In wartime, the sixteenth carrier would be undergoing a service life extention program and might not be available for many months. During that period, the Navy would have to create another air wing.

The Navy argues that this difference between wings and carriers is temporary and acceptable because an additional carrier will be in extended

overhaul and thus only 14 carriers will be readily deployable. History suggests, however, that defense planners have not been comfortable with such a plan. At least since 1970, the Navy has never had fewer wings than carriers. Indeed, during most of the period since 1970, the Navy planned to have one or two more wings than aircraft carriers.

Aircraft Shortfalls

Last year, CBO estimated that in the 1990s the Navy would have a shortfall of combat aircraft—that is, requirements for combat aircraft would exceed the Navy's Inventory. This year, the Navy has changed its requirements and also, because of changes in planned procurements, its projected inventory. Because these changes offset each other, the shortfall remains.

Removal of an air wing in this year's plan reduces requirements by about 130 aircraft, which cuts the shortfall. (Eighty-six of these planes are in the wing itself while the remaining 44 planes are needed for training and maintenance backup.) On the other hand, reductions in planned procurements will eventually cut inventories by about 150 planes. Thus, CBO estimates that the Navy will have a shortfall of about 190 combat aircraft by 1994, the first year when all the planes bought by 1992 will have been delivered. Given the unit costs the Navy expected for the last year of the 1988 plan, meeting this shortfall would require spending an additional $6.2 billion on aircraft procurement. (Table 3 shows shortfalls and costs for each type of aircraft. These costs are intended as rough approximations, not specific budget numbers, which would reflect rate changes and other factors.)

That shortfall, and the cost to meet it, would, of course, be substantially larger if removing the air wing is temporary, as the Navy has argued. Restoring the air wing removed in this year's plan would increase requirements, driving up the shortfall in 1994 to about 320 aircraft.

TABLE 3. COST/SAVINGS OF MEETING SHORTFALLS AND AVOIDING EXCESSES (1988 Budget Authority)

System	1992 Procurement Unit Cost (In millions of dollars)	Quantity Short (Over)	Cost (In billions of dollars)
F-14	73.7 a/	(25)	(1.8)
F/A-18	24.8	(17)	(0.4)
A-6 b/	35.3	158	5.6
AV-8	20.7	(5)	(0.1)
EA-6	49.8	19	0.9
E-2	68.8	(15)	(1.0)
S-3	36.2 c/	29	1.0
SH-60B	17.1	4	0.1
SH-60F	16.6	(10)	(0.2)
P-3	41.4	61	2.5
SH-2	8.9 d/	12	0.1
CH-53	30.8	(12)	(0.4)
CH-46/V-22	36.2	(4)	(0.1)
AH-1	8.1 e/	(5)	f/
Net Shortfall		190 g/	6.2

SOURCE: Congressional Budget Office from the fiscal year 1989 Budget Submission and Navy data.

a. 1989 procurement unit cost deflated to 1988 dollars.

b. Shortfalls of this category of aircraft will eventually be met by purchases of A-12 aircraft. However, planned purchases of A-12 aircraft are classified.

c. V-22 procurement unit cost used as a proxy.

d. 1987 procurement unit cost inflated to 1988 dollars.

e. 1988 procurement unit cost.

f. Under $100 million.

g. The composition of this shortfall--though not its size--is affected by assumptions about the types of wings the Navy will have by 1994. The Navy is making a transition to "Teddy Roosevelt" air wings that contain more A-6 (or A-12) aircraft than the current standard wing, but fewer F-14s and F/A-18s. The numbers above reflect Navy wing transition schedules from last year. The Navy has apparently slowed this transition. If the new schedule were reflected in the analysis, the total shortfall would be similar to that shown above, 188, since both types of wings contain a total of 86 aircraft. A-6 shortfalls would be smaller and F-14s and F/A-18s would begin to experience small shortages.

In Congressional testimony last year, the Navy acknowledged shortfalls of combat aircraft similar to those calculated by CBO. It also

formally supplied CBO with planning factors roughly consistent with Navy estimates of shortfalls. These factors prescribe planned retirements, numbers of aircraft needed for training and maintenance backup, and other similar information. CBO used these factors in calculating the shortfalls described in this tesimony. (Attachment A at the end of my testimony shows Navy estimates of shortfalls.)

Of course, the Navy could have altered its planning factors. But most changes that would substantially reduce shortfalls also have operational implications. For example, the Navy could reduce shortfalls by keeping aircraft longer than it had planned last year. That would, however, increase the fleet's average age. The average age for all combat aircraft already exceeds 12 years and is growing. (The average age for fighter/attack aircraft--whose stressful mission may make age most important--will decline modestly over the next two years but then will begin to rise and by 1994 will be slightly higher than it is today.)

Should the Navy's advanced tactical aircraft (ATA)--now designated the A-12--enter the inventory in large quantities by 1994, CBO's estimates of shortfalls could be smaller. The A-12 will eventually replace the A-6 aircraft, but details of the program are classified. Former Secretary of the Navy John Lehman indicated, however, that the plane might be on a schedule similar, or perhaps even a bit ahead, of the one for the Air Force's advanced tactical fighter. If procurement of the A-12 was to begin in 1991, two years ahead of plans for the Air Force fighter, and the plane was procured at rates similar to those at the beginning of the A-6 program, then there would be enough A-12s in the inventory to reduce the shortfall in 1994 to about 160 aircraft.

Implications of Aircraft Shortfalls. What are the implications of shortfalls in combat aircraft? They are certainly not a complete measure of aircraft

carrier capability. Such a measure would need to consider the number of carriers and the capability of embarked aircraft. Shortfalls are probably best viewed as a measure of how fully aircraft carriers are utilized. By that measure, the Navy's shortfall in 1994 of 190 planes amounts to about 5 percent of its total combat aircraft requirements. Viewed another way, the 1994 shortfall of those aircraft normally deployed on carriers is about the equivalent of an air wing and its supporting aircraft.

The Navy argues that these shortfalls will not result in carriers being deployed in peacetime without a full complement of aircraft. To meet shortfalls, the Navy would "crossdeck" planes--that is, take them from an air wing that has just returned from deployment and place them on a carrier being deployed. The Navy could also reduce the number of planes undergoing routine maintenance.

These various accommodations may, however, reduce defense capabilities, particularly in wartime. In peacetime, crossdecking of aircraft means they fly more and thus reach the end of their expected service lives faster; indeed, crossdecking has been vigorously opposed by the Navy in the past. Reducing time in routine peacetime maintenance may also make planes wear out faster. Moreover, crossdecking means less time available to modify aircraft, which decreases the Navy's ability to offset technological obsolescence by upgrading older planes. These problems are more worrisome because the Navy's fleet is aging and because the Navy expects to offset shortfalls by keeping aircraft longer and modifying them to meet increasing enemy threats.

The problems posed by aircraft shortfalls, however, would be most severe in wartime. At such a time, the Navy would want to deploy immediately many units that, in peacetime, are in workup for deployment. Shortfalls that can be accommodated in peacetime may lead to units being deployed in wartime without all of their assigned aircraft. Shortfalls would

also mean that fewer spare planes would be available to replace aircraft damaged in combat.

Ship Shortfalls

An aircraft carrier and its aircraft are also accompanied by a force of surface combatants that play an important role in the carrier's defense. Based on Navy requirements in last year's plans, CBO estimated that, by the turn of the century, the Navy would be short some 22 carrier escorts (cruisers and destroyers). Ship shortfalls could cause problems in defending aircraft carriers in a major war against the Soviets.

EARLY CARRIER RETIREMENT

Retiring an aircraft carrier would restore the equality between numbers of carriers and wings, though without further decreases in the number of wings it would not reduce aircraft shortfalls. Retiring an aircraft carrier would also reduce costs. Last year, at the request of this Subcommittee, CBO estimated the costs associated with the legislation proposed by the Chairman, which involved retiring an older carrier and an air wing in 1990 when a new carrier--the Lincoln--is commissioned. Another older carrier would be retired in 1992 when the Washington is commissioned. Savings for the 10-year period from 1988 through 1997, expressed in constant 1988 dollars of budget authority, ranged from $0.9 billion to $3.9 billion. (Attachment B to my statement contains the CBO estimate and Attachment C contains the Navy's estimates of savings provided in response to CBO questions.) The range reflects different assumptions about actions that the Navy could take after retiring the carrier. Key among the assumptions are:

- End-strength reductions. Would the Navy reduce its number of military personnel after retiring the carrier or use those people to meet other personnel needs?

- Aircraft retirements. Would the Navy retire aircraft that would have otherwise been aboard the carrier or use them to meet aircraft shortfalls?

- Indirect costs. Would the Navy limit reductions in costs to those directly associated with the retired carrier and aircraft or would it make reductions in its support forces, such as trainers and providers of medical care?

If all these key assumptions were made in ways that maximize savings, then total savings would reach $3.9 billion over 10 years. (The estimate of $3.9 billion, made last year, assumes retirement of an air wing. Because the new Administration plan deletes a wing, the Congress might decide not to accompany retirement of a carrier with retirement of a wing. That decision would reduce maximum savings from $3.9 billion to $2.2 billion.) Attachment B shows the effects of other choices on savings.

The Subcommittee has also received estimates from the Navy and from the General Accounting Office. These estimates vary in magnitude, but they all indicate that early carrier retirement would produce savings.

CONCLUSION

Mr. Chairman, retiring aircraft carriers earlier than planned would clearly reduce costs. It would also restore equality between the number of wings and carriers or, if accompanied by a further reduction in air wings, it would reduce aircraft shortfalls. By those measures, retiring carriers would mean fuller utilization of the remaining vessels. On the other hand, it would mean fewer aircraft carriers that could be deployed in peace or war. These are the advantages and disadvantages you must weigh in deciding how many carriers to maintain in the U.S. Navy.

Attachment A

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

Ser 508/7U403392

From: Deputy Chief of Naval Operations (Air Warfare)
To: Congressional Budget Office, Budget Analysis Division
(ATTN: Ms. Pierrot)

Subj: PLANNING FACTORS FOR NAVAL AIRCRAFT

Encl: (1) Summary of aircraft planning factors provided by CBO to USN 19 MAR 87.

1. Enclosure (1) is a summary of planning factors used by the Congressional Budget Office analysts to assist in determining U. S. Navy aircraft requirements/shortfalls in 1987 and 1994. Some of this information has been modified/clarified through phone conversations and these changes are reflected in the comments that follow. Enclosure (1) is forwarded and concurred in with the following modifications:

o Page 2 - SHORTFALLS (OVERAGES) should be modified to read:

	1987		1994		
System	CBO	Navy	CBO	Navy	
F-14	11*	7	16	11	NOTE (1)
FA-18	21*	21	5	0	NOTE (1)
A-6/KA-6	20	22*	61	59*	
AV-8	22	23*	(13)	(14)	
EA-6	3*	5	27	24	NOTE (1)
E-2	13*	12	(10)*	(10)	NOTE (1)
S-3A/B	20	24	42*	36	NOTE (1)
SH-60B	10	11	10	7	
SH-3/SH-60F	5	7	7	9	
P-3	45	54	49	51	
SH-2	(1)*	0	9*	10	NOTE (1)
CH-53	(4)	(5)	5	5	
CH-46/V-22	(7)*	(8)	4	2	NOTE (1)
AH-1	2	(4)	7	12	
	160	169	222	202	

* Denotes Change

NOTE (1) It is understood that CBO has adjusted their figures to reflect these new totals.

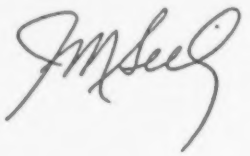
o Page 3 - Modify the Retirement Assumptions to read:

A-7E	72 A-7's will be stored in 1990 with service life remaining. (72 vice 108)
A-4	Delete "25 A-4's will be stored in 1987 with service life remaining" Insert "All A-4's will go to AIRLANT/AIRPAC to replace the TA-4J's going to CNATRA."
EA-6B	EA-6B's will retire at 35 years of age vice 40.
E-2C	E-2C's will retire at 22 years of age vice 21.
P-3A	Delete. P-3A OSM is 330 mos (27.5 years) vice 22 years.

Page 4 - Under the "ATTACK" section, the following changes should be made:

- o All A-7E's will be retired from the active Navy by the end of 1991 vice 1990.
- o A-7 Naval Reserve squadrons in operation will be: 1987-4, 1988-4, 1989-3, 1990-2, 1991-0.

Page 7 - Delete the 3 sentences and replace with the following: "The CH-46E requirements include 15 active squadrons and 2 Reserve squadrons. The active squadrons are composed of 12 aircraft each and will remain with that number of aircraft. In 1994 and beyond the V-22 active squadrons will have 15 aircraft each."



Attachment B

CONGRESSIONAL BUDGET OFFICE
U.S. CONGRESS
WASHINGTON, D.C. 20515

November 13, 1987

Honorable Edward M. Kennedy
Chairman
Subcommittee on Projection Forces
and Regional Defense
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In response to your request of October 13, 1987, the Congressional Budget Office (CBO) has estimated the savings for the retirement of aircraft carriers under your amendment (Number 777) to the National Defense Authorization Act for 1988 and 1989, S. 1174. In general terms, your amendment requested that the Navy study the alternative of retiring an older aircraft carrier (the Coral Sea) in 1990 when a new carrier (the Lincoln) is commissioned. The amendment would also study retiring another older carrier (the Midway) in 1992 when another new aircraft carrier (the Washington) joins the fleet. A carrier air wing of the Midway-type would also be eliminated in 1990 when the first carrier retires. Thus the alternative would have one less aircraft carrier and one less air wing than the Administration plans for the period from 1990 to 1996. In 1997 and beyond, however, forces under the amendment would be the same as those planned by the Administration. Table 1 identifies the force structure under Administration plans and the amendment.

We have prepared two sets of estimates--a set assuming personnel levels are reduced and a set assuming they are not. Assuming no manpower changes, your amendment would save about $0.3 billion per year in outlays (see Table 2); these estimates apply to either National Defense (function 050) or to the federal budget as a whole. When personnel levels change, savings in the Defense function increase to about $0.6 billion per year (see Table 3), but the savings in the Federal budget increase less-- to $0.5 billion per year (see Table 4). The difference occurs primarily because of accrual accounting for military retirement where some of the extra savings in the Defense budget are offset by for gone receipts in the military retirement trust fund (functions 600 and 950). Table 5 shows our estimate of the number of manpower reductions associated with the force structure change.

As you requested, we have worked with the General Accounting Office (GAO) and have provided them with a copy of our estimates. To date, we have not seen GAO's own estimates of the savings from earlier carrier retirement.

We also provided a copy of our estimates to the Navy for comment and review. The Navy responded by supplying its own estimates showing savings of $0.2 billion per year when personnel levels are unchanged and $0.3 billion when personnel levels are reduced. Much of the difference in CBO and Navy estimates is due to the estimate of indirect savings. CBO's estimates assume that all support functions such as base operations, force and individual

training, headquarters, and medical and other personnel support would be affected by the proposed force change. The Navy asserts that it is impossible to estimate the magnitude of savings in these areas but agrees that some savings would be possible. CBO and Navy estimates for direct savings are close when personnel levels are unchanged, but differ by about $0.1 billion per year when they are reduced.

AIRCRAFT SHORTFALLS

You also asked that we estimate the impact of your amendment on the Navy's shortfall of combat aircraft. The net shortfall of naval aircraft under the Administration's plans would total 176 aircraft by 1994, the earliest year when all of the planes bought under the Administration's program will have been delivered. (This shortfall does not reflect any changes in naval aircraft procurement stemming from Congressional action on the 1988 budget.) A rough estimate of the cost to buy these 176 planes would equal about $7.0 billion in 1988 dollars of budget authority. The net shortfall associated with the smaller force structure proposed in your amendment would be 78 planes which would cost about $3.9 billion. Thus the smaller requirement would reduce the shortfall in 1994 by 98 planes and the cost to buy them by about $3.1 billion. Your amendment would not affect the shortfall of naval aircraft in 1997 and beyond, however, since the amendment assumes forces rise to the Administration's planned level by then.

These estimates of aircraft shortfalls assume that aircraft retire at ages now planned by the Navy. Costs to meet shortfalls are approximate and generally assume that added aircraft are purchased at expected prices for buys planned for 1992. The estimates also make many other detailed assumptions that are discussed in a forthcoming CBO study.

SHIP COSTS

In addition, your letter requested that we provide a separate estimate, not directly related to your amendment, of the costs of buying major naval vessels that would be needed to meet all Administration goals. To answer this question, we first developed the costs of a plan for ship buys identical with Administration plans through 1992; beyond 1992, when Administration plans are not publicly available in detail, we assumed purchases that seemed consistent with general plans that are available (see Table 6 for details). We then estimated how closely those assumed purchases would meet Administration goals--defined as a 600-ship Navy including a force of 15 deployable aircraft carriers and associated escort ships--and estimated costs to meet shortfalls.

Our analysis considered only the following types of ships: ballistic missile submarines, nuclear attack submarines, aircraft carriers, and carrier escorts (cruisers and destroyers). From 1982 through 1987, costs for these major vessels consumed an average of about 70 percent of the total Navy budget for shipbuilding and conversion (the SCN account). The analysis also assumed that older ships retire at ages roughly consistent with recent plans and practices (carriers at 45 years, surface escorts at 30 years, submarines at 30 years). Navy plans for retirements, which are classified, could differ. Our analysis does not reflect changes that Congress may make in the 1988 budget.

We estimate that, from 1988 to the year 2000, the cost to buy major vessels in numbers that seem consistent with Administration plans would total about $137 billion (in 1988 dollars of budget authority). Total SCN costs would of course be higher since our estimate only includes major vessels. This total of $137 billion would exceed what has been spent on major vessels in the past. If budget authority for major vessels did not grow in real terms above its 1987 level, it would total $112 billion (in 1988 dollars) in the period 1988-2000. Indeed, the $137 billion for major vessels would equal all of SCN

spending if there is no real growth. If budget authority for SCN remained at its 1987 level in real terms, it would also total about $137 billion in the period 1988-2000.

This spending might still not meet all Administration requirements. Our analysis showed that the numbers of ships bought in Table 6, coupled with likely retirement ages, would leave the Administration with 22 fewer cruisers and destroyers than are called for in its current force goals. Added costs to eliminate this shortfall would total about $15 billion. Based on our assumptions, this would bring total costs of all major vessels needed to meet Administration goals to $152 billion.

With best wishes,

Sincerely,

Edward M. Gramlich
Acting Director

Enclosure

TABLE 1. FORCE STRUCTURE UNDER ADMINISTRATION PLANS AND THE AMENDMENT

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Administration										
Deployable Aircraft Carriers	14	14	15	15	15	15	15	15	15	15
Active Carrier Air Wings	14	14	14	14	14	14	14	14	14	14
Amendment a/										
Deployable Aircraft Carriers	14	14	14	14	14	14	14	14	14	15
Active Carrier Air Wings	14	14	13	13	13	13	13	13	13	14

a. Retire one small deck carrier in 1990 when the USS Abraham Lincoln is commissioned and retire another in 1992 when the USS George Washington is commissioned. Stand down a Midway type air wing in 1990 when first small deck carrier retires. Air wing composition is assumed to be:

F/A-18	36
A-6/KA-6	16
SH-3	6
EA-6	4
E-2	4
Total	66

TABLE 2. TOTAL FEDERAL BUDGET SAVINGS FROM THE AMENDMENT-ASSUMING NO ENDSTRENGTH CHANGES
(By fiscal year, in billions of 1988 dollars)

		1988	1989	1990 a/	1991	1992	1993	1994	1995	1996	1997 a/	1988-1997 b/
Budget Authority												
Carrier Savings	Direct	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
	Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Total	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.1
Air Wing Savings	Direct	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.7
	Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	Total	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
Total	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.6
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.4
	Total	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.0
Outlays												
Carrier Savings	Direct	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
	Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Total	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	1.0
Air Wing Savings	Direct	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
	Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	Total	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
Total	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5
	Indirect	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.4
	Total	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	1.9

a. CBO assumed a mid-year activation or deactivation of forces.

b. Details may not add to totals because of rounding.

TABLE 3. FUNCTION 050 SAVINGS FROM THE AMENDMENT-ASSUMING ENDSTRENGTH CHANGES a/
(By fiscal year, in billions of 1988 dollars)

		1988	1989	1990 b/	1991	1992	1993	1994	1995	1996	1997 b/	1988-1997 c/
Budget Authority												
Carrier Savings	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.6
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.6
	Total	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.2
Air Wing Savings	Direct	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
	Indirect	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
	Total	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.1	1.8
Total	Direct	0.0	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.2	2.6
	Indirect	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.4
	Total	0.0	0.0	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.3	3.9
Outlays												
Carrier Savings	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.5
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.5
	Total	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.1
Air Wing Savings	Direct	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
	Total	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	1.7
Total	Direct	0.0	0.0	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.2	2.5
	Indirect	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.3
	Total	0.0	0.0	0.2	0.5	0.5	0.6	0.6	0.6	0.6	0.3	3.7

a. Savings in the federal and DoD budgets differ because of the effects of accrual accounting for military retirement and other pay costs offset in the federal budget.

b. CBO assumed a mid-year activation or deactivation of forces.

c. Details may not add to totals because of rounding.

TABLE 4. TOTAL FEDERAL BUDGET SAVINGS FROM THE AMENDMENT-ASSUMING ENDSTRENGTH CHANGES a/
(By fiscal year, in billions of 1988 dollars)

		1988	1989	1990 b/	1991	1992	1993	1994	1995	1996	1997 b/	1988-1997 c/
						Budget Authority						
Carrier Savings	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.6
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.6
	Total	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.2
Air Wing Savings	Direct	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
	Indirect	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
	Total	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.1	1.8
Total	Direct	0.0	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.2	2.6
	Indirect	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.4
	Total	0.0	0.0	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.3	3.9
						Outlays						
Carrier Savings	Direct	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.4
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.5
	Total	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	1.8
Air Wing Savings	Direct	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
	Indirect	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
	Total	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.5
Total	Direct	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.2
	Indirect	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	1.1
	Total	0.0	0.0	0.2	0.4	0.5	0.5	0.5	0.5	0.5	0.3	3.3

a. Savings in the federal and DoD budgets differ because of the effects of accrual accounting for military retirement and other pay costs offset in the federal budget.

b. CBO assumed a mid-year activation or deactivation of forces.

c. Details may not add to totals because of rounding.

TABLE 5. CUMULATIVE MANPOWER REDUCTIONS ASSOCIATED WITH FORCE CHANGE
(Numbers of people by end of fiscal year)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Active										
Officers	0	0	700	700	700	700	700	700	700	0
Enlisted	0	0	6,300	6,300	6,300	6,300	6,300	6,300	6,300	0
Reserve										
Officers	0	0	50	50	50	50	50	50	50	0
Enlisted	0	0	300	300	300	300	300	300	300	0
Total Military	0	0	7,350	7,350	7,350	7,350	7,350	7,350	7,350	0
Civilian	0	0	1,550	1,550	1,550	1,550	1,550	1,550	1,550	0

NOTE: Numbers may not add to totals because of rounding.

TABLE 6. MAJOR VESSELS PURCHASED

Ship Type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Trident a/	1	1	1	1	1	1							
CVN b/			1			2	1		1		2		1
SSN 688	3	2	2	2	1								
SSN 21		1		2	2	4	4	4	4	4	4	4	4
CG 47	2	2	1										
DDG 51	3	3	3	5	6	6	6	6	6	6	6	6	6
Additional Ships to meet goals c/		3	3	3	3	3	3	2	2				

a. The plan buys Trident ballistic missile submarines (SSBNs) only through 1993, when the twentieth unit will be authorized. The projection limits the Trident force to 20 submarines due to constraints on basing additional SSBNs. Authorizing Trident SSBNs at one per year from 1994 through 2000 would cost an additional $9 billion, increasing the thirteen-year cost for major vessels from $137 billion to $146 billion.

b. The plan assumes that aircraft carriers retire after 45 years of service. CVN-74 and CVN-75 are authorized in accordance with current Navy plans. Because of the lead time required to build new aircraft carriers, other replacement carriers are authorized eight years in advance of assumed retirement dates. Three carriers are scheduled to retire in 2006, thereby requiring their replacements to be authorized in 1998. In order to smooth out carrier procurement, two of these replacements are assumed to be authorized in 1998, with the third authorized in 2000. A total of eight aircraft carriers are authorized in the period.

c. This line adds 22 cruisers and destroyers needed to reach the Navy's force goal of 137. The cost for these additional ships totals about $15 billion. The total cost for buying this plan would increase to $152 billion if these ships are added.

cc: Honorable William S. Cohen
Ranking Minority Member

Attachment C

DEPARTMENT OF THE NAVY
OFFICE OF LEGISLATIVE AFFAIRS
WASHINGTON, D. C. 20350

IN REPLY REFER TO
LA-5-259:lrm
23 October 1987

Dear Mr. Miller,

In response to your request for information on savings associated with early carrier retirement, the attached material is forwarded.

Sincerely,

J. J. CHERNESKY
Captain, U.S. Navy
Director, Navy Programs

Mr. Michael Miller
Congressional Budget Office
2nd & D Streets S.W.
Washington, D.C. 20515

Enclosure

COST ANALYSIS

SAVINGS ASSOCIATED WITH EARLY CARRIER RETIREMENT

This study has been conducted in response to an inquiry from the Congressional Budget Office (CBO) regarding the accuracy of their predicted savings resulting from the early retirement of the aircraft carriers USS MIDWAY and USS CORAL SEA and one "Midway" carrier air wing. The assumptions and methodology underlying this analysis are presented below followed by the study results in Table 1.

Specifically, Table 1 depicts the expected savings associated with the retirement of the USS CORAL SEA in 1990 vice 1992, the USS MIDWAY in 1992 vice 1997, and a stand-down from 14 to 13 active carrier air wings for the period 1990 to 1997. Costs are presented by fiscal year for FY90-97 in FY88 $M, broken down into carrier and air wing MPN and other Operating and Support (O&S) Costs. In general, O&S corresponds to - but is not identical to - the O&MN budget category (there may be small amounts of MPN and procurement included in O&S). Carrier costs are those for the USS MIDWAY (CV-41) in FY86, escalated to FY88 $ from the Ships' Visibility And Management of Operating and Support Costs (VAMOSC) database. Aircraft costs are derived primarily from the Aircraft VAMOSC database with modifications to accurately indicate true aircraft operating and support costs. Costs were normalized to costs per aircraft and then aggregated according to the air wing inventory. Since the preponderance of the costs accounts making up the VAMOSC data base are accounts like O&MN and MPN which have very high outlay rates, Table 1 represents a close approximate of both budget authority (BA) and outlays.

Recent operating costs are being used to predict future savings. This approach is reasonably accurate for categories other than personnel. For personnel, however, using costs to predict savings assumes that there are changes in end-strength which occur immediately upon deactivation (see assumptions 4. and 5. below). This usually will not occur. Any changes in

end-strength will occur over time and will be accomplished by not recruiting replacements for attrition losses. This will result in a fractional increase in grade and seniority which will likewise take some time to settle out. Therefore, the predicted savings with and without personnel costs included should be taken as upper and lower bounds on actual savings.

It cannot be assumed that as a result of deactivating carriers and an air wing earlier than currently planned that Navy end strength would automatically be reduced. In the past , end strenth has not been reduced because:

- The manpower freed up by deactivation would be needed to correct personnel shortages in other areas.

- Mid-level military personnel cannot be reduced "in force." Endstrength reductions, when forced by Congress, normally are effected through attrition and reduced recruitment. The overall effect of this is to "dampen" any potential "savings."

- The Navy would ultimately be building back to the 15 CVBG level in 1997. Needed talent, particularly at the mid level, cannot be recruited and trained rapidly. Skilled enlisted personnel therefore would not leave or be released from the service. Rather, they would be reassigned as needed and become part of the orderly ramp-up to a fully manned 15 CV level in 1997.

- For similar reasons, civilian manpower, which in this scenario is principally indirect or overhead costs, would not be reduced.

For all of these reasons, despite a reduction of billets by early deactivation, actual savings in personnel costs would not necessarily be realized. Therefore direct savings would more closely approximate the lower end of the savings range, i.e. $1.4B, than the higher end.

Only savings of Direct Costs have been predicted. Indirect Costs are incurred by placing demands upon elements of the support infrastructure. While these demands will be lessened by decommissioning the units in question, there will not be an immediate discernible effect on this support infrastructure. Undeniably, over time, some savings will be realized. The magnitude of these changes is almost impossible to accurately estimate. In this case, particularly, since the reduction is only for a period of seven years, any savings would be for a short period of time.

The study is based upon the following assumptions:

1. The baseline contained in the CBO letter of 8 October 1987. Specifically, activation/deactivation occurs at mid-fiscal year and the alternative force structure listed in Table 1: Retire one CV in 1990, the second in 1992. Reduce from 14 to 13 active carrier air vings in 1990. Reach 15 deployable aircraft carriers and return to 14 air wings in 1997. Air wing composition is:

F/A-18	36
A-6/KA-6	16
SH-3	6
EA-6	4
E-2	4

2. Indirect costs are not estimated.

3. Salvage/retirement costs for the decommissioned ships equal salvage value. The ships would not be "mothballed" with costs associated therevith.

4. MPN savings equal current MPN costs for these units. i.e. that end-strength reductions reflect the rank, specialty and seniority structure of the decommissioned commands.

5. Savings begin to accrue at the moment of decommissioning; i.e., at mid-fiscal year. For example, the savings in FY90 are 1/2 the annual operating costs of the decommssioned commands. The savings in FY97 are likevise 1/2 the total annual costs, based upon the assumption of commissioning the 15th carrier and 14th air wing at mid-year. End-strength changes occur at decommissioning.

6. The table presents only savings associated with decommissioning the specified commands, not with any other changes in force structure.

7. The Navy's overseas commitments will remain constant at the current level and it will continue to fulfill its overseas commitments with 14 vice 15 carriers.

8. The OPTEMPO of the decommissioned units during the years in question would have been the same as in FY86.

FY88 $M DIRECT SAVINGS

FISCAL YR	90	91	92	93	94	95	96	97	TOTAL 90-97
CARRIER O&MN	$51.1	$102.1	$102.1	$102.1	$102.1	$102.1	$102.1	$51.1	$714.7
CARRIER PERS	$21.8	$43.6	$43.6	$43.6	$43.6	$43.6	$43.6	$21.8	$305.2
AIRWING O&MN	$45.3	$90.7	$90.7	$90.7	$90.7	$90.7	$90.7	$45.3	$634.6
AIRWING PERS	$24.9	$49.8	$49.8	$49.8	$49.8	$49.8	$49.8	$24.9	$348.6
TOTAL W/O PERS	$96.4	$192.8	$192.8	$192.8	$192.8	$192.8	$192.8	$96.4	$1,349.3
TOTAL INCL PERS	$143.1	$286.2	$286.2	$286.2	$286.6	$286.2	$286.2	$143.1	$2,003.1

A/C TYPE	# PER CVN	PER A/C O&MN	PER A/C PERS	PER A/C TOTAL	CVW O&MN	CVW PERS	CVW TOTAL
F/A-18	36	$1,248	$0.591	$1,839	$44.9	$21.3	$66.2
A-6	16	$1,756	$0.663	$2.419	$28.1	$10.6	$38.7
SH-3	6	$0.744	$0.963	$1.707	$4.5	$5.8	$10.2
EA-6B	4	$1.798	$1.616	$3.414	$7.2	$6.5	$13.7
E-2C	4	$1.496	$1.417	$2.913	$6.0	$5.7	$11.7
TOTAL					$90.7	$49.8	$140.5

nator KENNEDY. Mr. Thurman.

TEMENT OF BILL W. THURMAN, DEPUTY DIRECTOR FOR LANNING AND REPORTING, NATIONAL SECURITY AND INTER-ATIONAL AFFAIRS DIVISION, GENERAL ACCOUNTING OFFICE

r. THURMAN. Mr. Chairman, we too are pleased to be here and e a fairly extensive statement describing the estimates, which I ld submit for the record.

nator KENNEDY. All of the statements will be included in the rd.

r. THURMAN. Thank you, sir. You asked us, as you have alluded o assume that the *Coral Sea* and the U.S.S. *Midway* would be aircraft carriers that would retire.

he committee also asked us to make some other assumptions ch we used in developing the three estimates that are shown up he chart (chart found in CRS statement) that you have displayed. ide range of estimates can be calculated for the early retire-t proposal, as you have said, Mr. Chairman, depending on the mptions used.

stimates differ depending on the rate at which fleet moderniza- and expansion would continue, whether aircraft would be re- or used to fill existing shortfalls, and whether indirect as well irect operational and support costs would be avoided.

vings estimates, as the charts (charts found in GAO statement) v, differ between CBO, GAO, and the Department of Defense, use of that variation in assumptions, as well as because of a ation in the data sources that were used to compile the esti-es.

e based our analysis primarily on cost reports, Navy cost re-s, which aggregate the expenditures associated with ships and raft, and used that as the fundamental source document to pute our estimates.

otential savings we calculated over the 7-year period, from l years 1990 through 1997, range from a low of about $1.1 bil- to a high of about $5.1 billion in budget authority.

et me just briefly summarize the assumptions associated with case. Our case one generally parallels the DOD savings esti-e and its assumptions about fleet shortfalls and modernization irements, although I should point out that that in no way im-, as the DOD witnesses suggested, that they agree with the osal for an early retirement. This case assumes that there ld be no indirect cost savings, such as shore base support asso-ed with the retirement.

he assumption was based on the Navy's contention that indirect savings, if measurable at all, would be of such short duration be negligible.

he case also assumes that aircraft from the deactivated wing ld be redistributed to meet the needs in other wings, and that modernization and expansion efforts would continue with no ys in planned procurement of ships, aircraft, or munitions.

ilitary personnel from the *Midway* and *Coral Sea* are assumed e reassigned to fill personnel shortfalls elsewhere. And in other ds, there would be no savings in military personnel costs in our

estimate labeled GAO one (Information found in the GAO statement).

Estimated budget authority savings for the second case were about double that of the previous, about $2.6 billion over the 7-year period.

The principal assumptions for this case were that indirect operating and support costs such as base support would vary in proportion to the direct costs associated with operating the carriers.

Second that operating and support savings would occur in military personnel accounts. In other words, the active military people on the stepdown carriers would leave the service, there would be a net loss.

Third, that ship procurement plans would be delayed for those ship types for which there are no shortfalls expected during the 1990s. And also, as in case one, aircraft from the deactivated wing would be reassigned, as needed, to fill shortfalls rather than retired earlier than planned.

The third case, and the one that produces the most savings shown on the chart. (Chart found in CRS statement). Estimated potential budget authority savings there turn out to be $5.1 billion.

Major assumptions were that all aircraft associated with the deactivated wing would be retired or used to replace older aircraft which would be retired, rather than used to satisfy shortfalls.

Second, that the fiscal year 1989 procurement plans for new ships and munitions associated with the 15th carrier battle group would be postponed, including ships for which shortfalls are projected.

Third, indirect operating and support costs would decrease proportionately with direct costs, and as in case two, savings would occur in military personnel.

Let me summarize, if I may, or let me give you some other numbers that you asked for, Mr. Chairman, quickly. The committee asked us to calculate and estimate the costs of operating a *Midway* battle group. We did that in two ways.

First, we estimated the costs associated with the current configuration. That turned out to be about $1 billion annually for the entire battle group.

We also calculated it for the so-called notional configuration, which is that mix of ships that the Navy would like to see in the battle group. That number turned out to be $1.4 billion.

To summarize, Mr. Chairman, the Navy officials with whom we worked during the course of our study made very clear their view that the proposal to retire two aircraft carriers ahead of schedule and to wait until 1997 to have 15 deployable carriers in the fleet has some implications, some adverse implications, for the Navy's ability to meet national security commitments.

We have not, as part of this effort, evaluated security or maritime strategy ramifications of such a decision. However, each of the three cases that are outlined on the chart would impact in some way on the Navy's force structure and the number of ships that will be available to the fleet.

Even with the Navy's current shipbuilding plans, it will not have all the combatants and support ships it needs to satisfy its stated battle force requirements into the 1990's and beyond.

Continuing with the Navy's current shipbuilding plan, the primary assumption that we used for case one would have the least negative impact on this shortfall situation. It would generally not cause the shortfalls to worsen, and the remaining 14 deployable carrier battle groups may have greater warfighting capabilities than they otherwise would have as new support vessels enter the fleet.

Case two would essentially maintain the status quo with regard to the combat, capability of the remaining 14 deployable carrier groups. But overall, the Navy would have fewer ships than the fleet can currently plan throughout the 1990's.

Under case two assumptions, construction would only be delayed for ships not expected to be in a shortfall position. Thus, the Navy would continue to improve its force goals but at a slower pace than planned.

Finally, the case three savings have the more serious policy implications in terms of this particular scenario. If that policy were adopted, the Navy's projected shortfalls, both in aircraft and ships, would clearly be exacerbated.

Thank you, Mr. Chairman. And I will stand by also for questions.

[The prepared statement of Mr. Thurman follows:]

Statement of
Bill W. Thurman, Deputy Director for Planning and
Reporting
National Security and International Affairs
Division

Estimates of Potential Savings By Retiring Two Aircraft Carriers Early

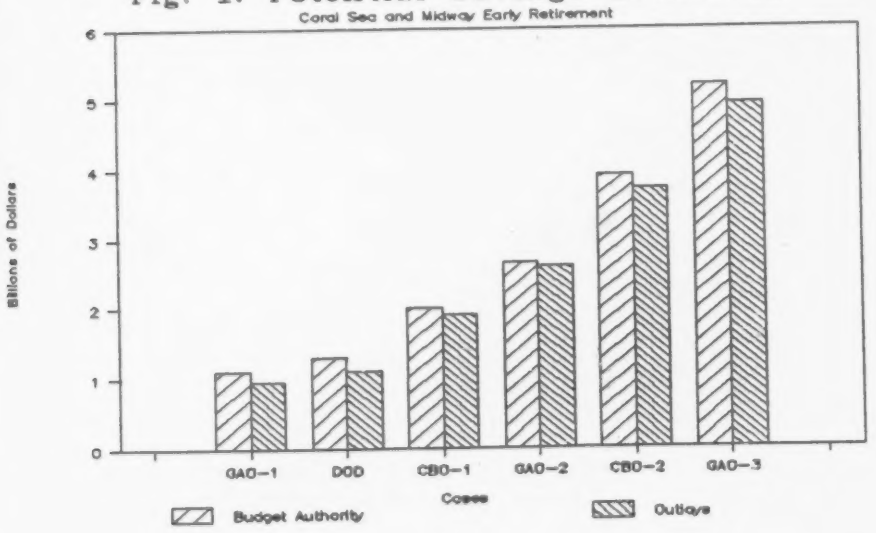
Mr. Chairman and members of the Subcommittee, we welcome the opportunity to be here today.

The National Defense Authorization Act for Fiscal Years 1988 and 1989, directed the Department of Defense to study the direct and indirect cost savings that could be achieved by decommissioning one older aircraft carrier in 1990 when the U.S.S. Abraham Lincoln is brought into the fleet and a second older carrier in 1992 when the U.S.S. George Washington is commissioned, and by deactivating an existing air wing in 1990. The net effect of this proposal, if implemented, would be to delay until 1997 reaching the goal of having 15 deployable aircraft carriers in the fleet.

In addition to the DOD study, you by asked that we and the Congressional Budget Office (CBO) independently develop estimates of direct and indirect cost savings for this proposal--assuming the carriers retired early would be the U.S.S. Coral Sea and U.S.S. Midway. The Committee also asked us to make other assumptions about the rate at which ship construction would continue in an effort to overcome existing ship shortfalls, whether aircraft would be retired or used to offset aircraft shortfalls, and whether indirect operating and support costs would be avoided. Using three different sets of assumptions, we calculated three savings estimates. While these estimates were independently developed, you also asked that we coordinate our efforts with those of CBO and DOD, which we have done.

A wide range of savings estimates can be calculated for the early retirement proposal depending upon the assumptions used. (See figure 1 below, and Appendix I.) For example, estimates differ depending upon the rate at which fleet modernization and expansion would continue, whether aircraft would be retired or used to fill existing shortfalls, and whether indirect--as well as direct--operational and support costs would be avoided. Savings estimates also vary among GAO, CBO, and DOD because different estimating methods and data sources were used. For example, we relied primarily on data from the Navy's Visibility and Management of Operating and Support Cost reports--known as VAMOSC-Air and VAMOSC-

Fig. 1. Potential Savings Estimates



Ships. These reports compile actual expenditures for ships and aircraft. We also used budget and other data in our analysis. We understand that CBO primarily used data from its Defense Resources Model which uses aggregated program elements from the Department of Defense's Five Year Defense Plan (FYDP). Appendix II provides a listing of assumptions we used in calculating our three cases.

SAVINGS ESTIMATES

The potential savings estimates we calculated over the 7-year period, fiscal years 1990 through 1997, range from a low of about $1.1 billion to a high of about $5.1 billion in budget authority. (See Table III.1 in Appendix III) Outlay savings would be slightly less due to the slower spend-out rates for some accounts.

Case I

Our case I generally parallels the DOD savings estimates and its assumptions about fleet shortfalls and modernization requirements--although this in no way implies that DOD endorses the early retirement proposal. This case assumes that there would be no indirect cost savings, such as shore base support and retired pay accrual costs. This assumption was based on the Navy's contention that indirect cost savings, if measurable at all, would be of such short duration as to be negligible. This case also assumes that aircraft from the deactivated wing would be redistributed to meet the needs in other air wings, and that fleet modernization and expansion efforts would continue with no delays in planned procurement of ships, aircraft, or munitions. Military personnel from the Midway and Coral Sea would be reassigned to fill personnel shortfalls.

These assumptions produce a savings estimate of $1.1 billion in budget authority and $950 million in outlays for fiscal years 1990 through 1997. In this case operating and support outlays would decrease by an average of approximately $136 million per year.

These savings estimates are shown on Table III.2 in Appendix III.

CASE II

The estimated budget authority and outlay savings calculated for case II are shown on Table III.3 in Appendix III. The principal assumptions for this case are that:

-- indirect operating and support costs, such as base support and other overhead costs, would vary in proportion to direct costs,

-- operating and support savings would occur in military personnel accounts,

-- ship procurement plans would be delayed only for those ship-types for which there are no shortfalls expected during the 1990s, and

-- aircraft in the Midway air wing would be reassigned as needed to fill shortfalls, rather than retired earlier than planned,

In this second case, estimated budget authority and outlay savings for fiscal years 1990 through 1997 are about $2.6 billion, more than double the savings in case I. All of the budget authority reductions, and most of the outlay savings, result from reductions in operating and support costs. Because ship construction plans would be delayed for only those ship classes where shortages are not expected, outlay savings for ship construction amount to only about $320 million over the 7-year period. Fiscal year 1989 ship construction budget authority could be reduced by about $1.3 billion, but if the Navy is to achieve its ship construction goals by 1997, these amounts would need to be authorized by fiscal year 1994 resulting in no budget authority savings over the 7-year period.

Because case II took into account aircraft shortages, direct savings for the air wing were about $350 million. No budget authority or outlay savings were calculated for the A-6E Intruders or EA-6B Prowlers because of current shortfalls and there was only a small savings for the F/A-18 Hornets. We assumed the A-6Es and EA-6Bs from the deactivated wing would be reassigned to offset projected shortfalls of those aircraft in other wings, and that the F/A-18 Hornets would replace older A-7E Corsairs scheduled to be retired in fiscal years 1990 through 1992. Air wing operating and support savings occurred primarily because older SH-3H Sea Kings and E-2C Hawkeyes were assumed to be retired earlier than planned.

CASE III

The principal assumptions we used for case III were that in addition to direct operating and support costs for the Midway, the Coral Sea, and the associated air wing:

-- all aircraft associated with the deactivated wing would be retired or used to replace older aircraft which would be retired rather than used to satisfy shortfalls;

-- the fiscal year 1989 procurement plans for new ships and munitions associated with the 15th carrier battlegroup would be postponed, including ships for which shortfalls are projected, and

-- indirect operating and support costs, such as base support and other overhead costs, would decrease proportionally with direct costs.

Based on these assumptions, we calculated potential budget authority savings of $5.1 billion and outlay savings of about $4.9 billion for the 7-year period. About $2.7 billion, or about 54

percent, of the outlay savings would come from reductions in direct operating and support costs for the two carriers and the air wing. This consists of about $1.6 billion from deactivating the air wing, $320 million from retiring the Coral Sea in mid-1990, and $700 million from retiring the Midway in mid-1992. The remainder of the outlay savings comes from indirect costs ($1.8 billion) and from costs avoided in ship construction and weapons procurement accounts ($470 million). These amounts are shown on Table III.4 of Appendix III under the section labeled "Outlays."

One important assumption for estimating purposes was that decisions would be made with sufficient lead-time to allow the savings to occur. This is particularly important to achieve savings in ship construction and weapons procurement. Assuming that the fiscal year 1989 procurement plans could be postponed, we estimated that about $2 billion could be saved in fiscal year 1989 budget authority. However, as in case II, if the Navy is to achieve its ship construction goals by 1997, these amounts would need to be authorized by 1994. Thus, overall budget authority savings for ship construction and weapon procurement over the 7-year period is zero.

Outlays decrease in ship construction and weapons procurement accounts by about $470 million over the 7-year period, but like budget authority, there are no long term outlay savings as outlays are merely postponed until after 1997. This, of course, assumes that the Navy would have 15 deployable carrier battlegroup after 1997.

Adopting the policy actions required to achieve the case III savings would exacerbate the Navy's projected shortfall of ships and aircraft. This depends on many factors, but as pointed out in the Secretary of Defense's posture statement for fiscal year 1988, even under the existing shipbuilding plan, the Navy will experience

a serious shortfall of combatants and support ships the 1990s. Our October 1987 classified report[1] on the status of the Navy's fleet expansion efforts elaborated on this issue. It estimated that even if the Navy were able to fully execute its shipbuilding plan, it would be 52 ships short of its minimum force requirement for carrying out the maritime strategy. Our report concluded that if historical patterns prevailed, the shortfall may be as high as 76 ships.[2] Copies of that report have been provided to the Committee.

COST TO OPERATE THE MIDWAY BATTLEGROUP

Mr. Chairman, you also asked us to calculate how much it costs annually to operate and support the Midway carrier battlegroup.

We calculated the annual operating cost in two different ways. We first calculated the estimated cost to operate the Midway carrier battlegroup as it is currently configured. Direct and indirect outlays for this configuration are about $1 billion annually--about $620 million for direct costs and about $400 million for indirect costs. We also calculated the cost to operate and support a Midway carrier battlegroup in the configuration that the Navy would like--what the Navy calls a notional configuration. Outlays for this type of configuration would run about $1.4 billion annually for both direct and indirect costs. Budget authority would be somewhat higher than this due to the lower average spend-out rates for some accounts. These amounts are shown in Table IV.1 in Appendix IV.

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[1]Navy Ships: Status of the Navy's Fleet Expansion Efforts, GAO/C-NSIAD-88-3, October 27, 1987.

[2]We analyzed 21 years of Navy experience in achieving shipbuilding plans. The analysis showed that if the historical pattern of authorization and funding prevails, shortfalls of certain ship types may be greater than the shortfalls for which the Navy is planning.

SUMMARY

In summary Mr. Chairman, the Navy officials with whom we spoke made it clear that the proposal to retire two aircraft carriers ahead of schedule, and to wait until 1997 to have 15 deployable aircraft carriers in the fleet, has implications for the Navy's ability to meet national security commitments. We have not evaluated the security or maritime strategy ramifications of such a decision.

However, each of our 3 cases would impact in some way the Navy's force structure and the number of ships that will be available to the fleet.

As I mentioned earlier, even with the Navy's current shipbuilding plans, it will not have all the combatants and support ships it needs to satisfy its battleforce requirements into the 1990s and beyond. Continuing with the Navy's current shipbuilding plan--the primary assumption for case I--would have the least negative impact on the Navy's shortfall situation. It would generally not cause the shortfalls to worsen, and indeed the remaining 14 deployable carrier battlegroups may have greater warfighting capability than they otherwise would have as new ships enter the fleet.

Case II would essentially maintain the status quo with regard to the combat capability of the remaining 14 deployable carrier battlegroups, but overall the Navy would have fewer ships in the fleet than currently planned throughout the 1990s. Under case II assumptions, construction would only be delayed for ships not expected to be in a shortfall position. Thus, the Navy would continue to improve its force goals, but at a slower pace than planned.

If the assumptions we used to calculate our case III savings were to be adopted as policy, the Navy may have greater shortfalls of ships than currently projected in the latter part of the 1990's and into the next century. The extent to which such a policy would affect the shortfalls estimates depends mostly on future policy choices that concern budget plans, but it also depends to some extent on whether the Navy can extend the service life of some ships and whether construction time can be shortened.

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This completes my prepared remarks. We would be pleased to respond to any questions you may have.

APPENDIX I

A Comparison of DOD, CBO, and GAO Estimates

In addition to GAO, the Congressional Budget Office and the Department of Defense also calculated an estimated savings by retiring the Midway and Coral Sea ahead of schedule, and by deactivating a Midway-type airwing. Figure I.1 shows the range of savings estimates calculated by each agency. This information is shown in summary form in table I.1.

FIG. I.1. POTENTIAL SAVINGS ESTIMATES

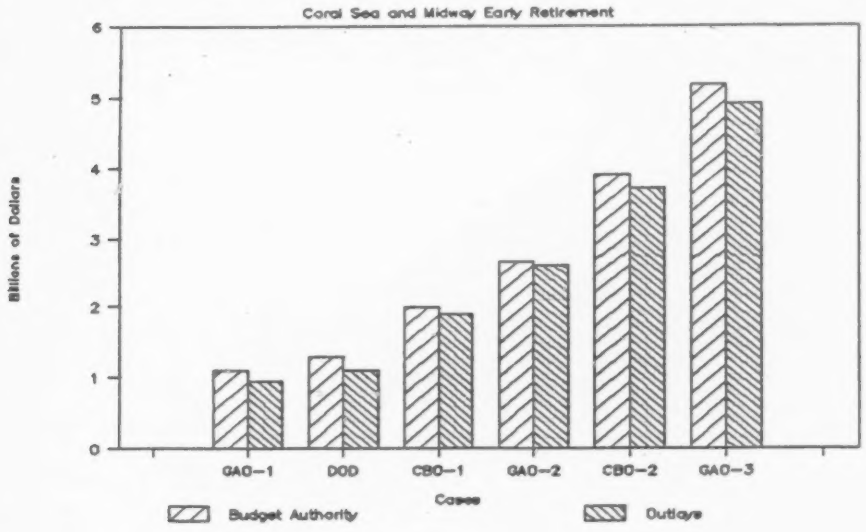


TABLE I.1 COMPARISON OF DOD, CBO, AND GAO POTENTIAL SAVINGS ESTIMATES

Savings Categories	DOD	CBO Cases 1	CBO Cases 2	GAO Cases 1	GAO Cases 2	GAO Cases 3
	(fiscal year 1988 $ in billions)					
BUDGET AUTHORITY						
Direct O&S	$1.300	$1.600	$2.600	$1.104	$1.595	$3.085
Indirect O&S	-	0.400	1.400	-	1.029	2.059
Procurement Cost Avoidance	-	-	-	-	-	-
Total (a)	$1.300	$2.000	$3.900	$1.104	$2.625	$5.144
OUTLAYS						
Direct O&S	$1.100	$1.500	$2.500	$0.950	$1.372	$2.653
Indirect O&S	-	$0.400	1.300	-	0.906	1.804
Procurement Cost Avoidance	-	-	-	-	0.320	0.468
TOTAL (a)	$1.100	$1.900	$3.700	$0.950	$2.598	$4.925

(a) Totals may vary due to rounding.

The different savings estimates for budget authority and outlays are based on a wide range of assumptions for decreasing operations and maintenance, military personnel, and procurement costs between 1989 and 1997. CBO's data can be used to calculate several estimates. For ease of comparison, we categorized these as CBO case I and CBO case II. As with GAO's cases II and III, CBO's case II assumed that personnel levels would be reduced. CBO's case I assumed that manpower levels would remain constant, as does our first case. In general, CBO and GAO estimates differ because CBO (1) used budget data from its Defense Resources Model and (2) assumed new aircraft to fill shortfalls would be purchased at expected prices for buys planned for 1992. In contrast, GAO used historical VAMOSC-Ships and VAMOSC-Air cost data to determine potential air wing savings and considered aircraft shortfalls only in cases I and II. DOD's estimate and our first case estimates were similar. However, unlike our first case, the DOD estimate assumed that (1) the Midway would be replaced by a Forrestal class

carrier in 1992 instead of 1997 and estimated the cost of altering base facilities in Japan to accommodate the larger carrier, and (2) planned manpower would decrease. A summary of the differing assumptions is in table I.2.

TABLE I.2 COMPARISON OF DOD, CBO, AND GAO ASSUMPTIONS

			GAO Case		
Assumption	DOD	CBO	I	II	III
-- Operating and support cost savings for Midway and Coral Sea	Yes	Yes	Yes	Yes	Yes
-- Estimate considers cost of replacing Midway with Forrestal class carrier	Yes	No	No	No	No
-- Operating and support cost savings for air wing	Yes	Yes	Reduced (b)	Reduced (b)	Yes
-- Military personnel cost savings (decreases in planned manpower)	Yes	Yes (a)	No	Yes	Yes
-- Marine Corps personnel savings	No	Yes (a)	No	Yes	Yes
-- Navy Reserve Personnel savings	No	Yes (a)	No	No	No
-- Sea and flight pay savings	Yes	Yes	Yes	Yes	Yes
-- Indirect Cost savings	No	Yes	No	Yes	Yes
-- Retired pay accrual savings	No	Yes (a)	No	Yes	Yes
-- Ship construction cost savings (shipbuilding plans change)	No	No	No	Reduced (c)	Yes
-- Aircraft procurement cost savings	No	No	No	No	No
-- Cost savings for munitions	No	No	No	Reduced (c)	Yes

(a) CBO developed two sets of estimates which could be divided into various subsets. These assumptions applied only to CBO's Case II.

(b) Air wing savings decreased as aircraft are reassigned to fill shortfalls, replace older aircraft, or are retired at ages now planned by the Navy.

(c) Procurement savings decrease because ships and munitions procurement plans are reduced only for those requirements not expected to be in short supply during the 1990s.

APPENDIX II

APPENDIX II

ASSUMPTIONS

To assess the range of estimated budgetary savings that would likely be realized from implementing the Committee's proposal, various assumptions were made. The assumptions applicable to each of the three cases are as follows:

Assumption	CASES 1	2	3
The Navy would operate and maintain one less aircraft carrier and one less air wing than planned for the period July 1990 through July 1997.	X	X	X
There would be no real growth in the budget after fiscal year 1988.	X	X	X
Decisions to retire the carriers and decommission the air wing would be made with sufficient lead time to allow savings to accrue.	X	X	X
Retired ships and aircraft would be sold for salvage (not mothballed) and retirement costs would equal the salvage value.	X	X	X
Operating and support savings would occur in Operation and Maintenance, Navy and Marine Corps; Weapons Procurement, Navy; Aircraft Procurement Navy; and Other Procurement, Navy, accounts.	X	X	X
Operating and support savings would occur in Military personnel accounts.		X	X

ASSUMPTIONS

	CASES		
	1	2	3
Operating tempos would remain at the current level throughout the 1990s.	X	X	X
If not retired, the proportion of total aircraft carrier funds allocated to the Midway and Coral Sea would remain at the current level throughout the 1990s.	X	X	X
Activation and/or deactivation would occur at mid-year.	X	X	X
The Midway blister problem would not be corrected.	X	X	X
Indirect Operation and Maintenance, Navy, costs would vary in proportion to direct costs.		X	X
Indirect costs would not decrease if Navy operated and maintained one less aircraft carrier and wing.	X		
Planned manpower level would decrease in fiscal years 1990 through 1997.		X	X
Planned manpower level would remain constant in fiscal years 1990 through 1997, and Midway and Coral Sea personnel would be reassigned to fill shortfalls.	X		
The Midway air wing would be decommissioned and aircraft would either be reassigned to replace older aircraft or retired earlier than planned.			X
Midway aircraft would either be reassigned to fill shortfalls, replace older aircraft, or retired at ages now planned by the Navy.	X	X	

ASSUMPTIONS

	CASES		
	1	2	3
Escort and under way replenishment ships would remain in the active force and would be reassigned to fill shortfalls or retired at ages now planned by the Navy.	X	X	X
Procurement of new ships and munitions would be delayed and result in savings in the Shipbuilding and Conversion, Navy, and Weapons Procurement, Navy, accounts.		X	X
Costs avoided for new ships would be at anticipated fiscal year 1989 prices.		X	X
Fiscal year 1989 procurement plans for Midway battlegroup and underway replenishment ships would be delayed until 1994 without considering shortfalls.			X
Shipbuilding plans would be delayed for only those ships not expected to be in short supply during the 1990s.		X	
Planned munitions procurement for the 15th carrier battlegroup would be delayed until 1995.			X
Munitions procurement would be fully funded because all items are assumed to be in short supply in the 1990s.		X	X
Ship procurement plans would be fully funded.		X	

TABLE III.1. SUMMARY TABLE: FISCAL YEARS 1990 THROUGH 1997 ESTIMATED SAVINGS

Savings Category	Budget Authority Case 1	Case 2	Case 3	Outlays Case 1	Case 2	Case 3
	(Fiscal Year 1988 Dollars in Millions)					
DIRECT OPERATIONS & SUPPORT						
Military Personnel, Navy (a)	0	$491	$853	0	$422	$734
Material & Other Services	$1,100	1,100	2,228	$946	946	1,916
Blister Problem (b)	4	4	4	4	4	4
Total Direct	$1,104	$1,595	$3,085	$950	$1,372	$2,653
INDIRECT OPERATIONS & SUPPORT						
Operations & Maintenance, Navy (c)	0	$879	$1,821	0	$756	$1,566
Retired Pay Accrual	0	150	238	0	150	238
Total Indirect	0	$1,029	$2,059	0	$906	$1,804
COST AVOIDANCE IN PROCUREMENT ACCOUNTS						
Ship	0	0	0	0	$320	$458
Ammunitions	0	0	0	0	0	10
Total Cost Avoidance	0	0	0	0	$320	$468
TOTAL (d)	$1,104	$2,625	$5,144	$950	$2,598	$4,925

(a) Direct Operations and Support military personnel costs are basic pay and allowances of Navy and Marine Corps officers and enlisted personnel assigned to ships or the air wing. Excluded are pay and allowances of officers and enlisted personnel assigned to shore bases, permanent change of station travel, retired pay accrual and other personnel costs indirectly related to ship and air wing operations and support.

(b) Navy cost estimate for modifying the U.S.S. Midway to help correct roll motions and wetness problems.

(c) Operations and Maintenance, Navy base support costs indirectly related to the operations of ships and aircraft (i.e., base operations and support, real property maintenance, etc.)

(d) Totals may vary due to rounding.

TABLE III.2. CASE 1: ESTIMATED COST SAVINGS
(FISCAL YEAR 1988 DOLLARS IN MILLIONS)

BUDGET AUTHORITY

Fiscal Year	DIRECT O&S (O&MN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Midway Blister Problem	Total Estimated Cost
1990	$67	$0	$35	$102	$4	$106
1991	134	0	70	204	0	204
1992	67	55	49	171	0	171
1993	0	111	28	138	0	138
1994	0	111	28	138	0	138
1995	0	111	28	138	0	138
1996	0	111	28	138	0	138
1997	0	55	14	69	0	69
TOTALS	$268	$553	$279	$1,100	$4	$1,104

OUTLAYS

Fiscal Year	DIRECT O&S (O&MN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Midway Blister Problem	Total Estimated Cost
1990	$58	$0	$30	$88	$4	$92
1991	115	0	60	175	0	175
1992	58	48	42	147	0	147
1993	0	95	24	119	0	119
1994	0	95	24	119	0	119
1995	0	95	24	119	0	119
1996	0	95	24	119	0	119
1997	0	48	12	60	0	60
TOTALS	$231	$476	$240	$946	$4	$950

TABLE III.3. CASE 2: ESTIMATED COST SAVINGS
(FISCAL YEAR 1988 DOLLARS IN MILLIONS)

BUDGET AUTHORITY

Fiscal Year	DIRECT O&S (O&MN,MPN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Indirect O&M,N	Indirect MPN (Retired Pay Accrual)	Midway Blister Problem	Total O&S	PROCUREMENT COST AVOIDANCE SCN	WPN	Total Estimated Cost
1989									$1,278	$0	$1,278
1990	$93	$0	$49	$142	$87	$12	$4	$245		0	245
1991	187	0	98	285	174	24	0	483		0	483
1992	93	81	70	245	140	22	0	407		0	407
1993	0	162	42	204	106	20	0	331		0	331
1994	0	162	42	204	106	20	0	331	(1,278)	0	-947
1995	0	162	42	204	106	20	0	331		0	331
1996	0	162	42	204	106	20	0	331		0	331
1997	0	81	21	102	53	10	0	166		0	166
TOTALS	$373	$809	$408	$1,591	$879	$150	$4	$2,625	0	0	$2,625

OUTLAYS

Fiscal Year	DIRECT O&S (O&MN,MPN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Indirect O&M,N	Indirect MPN (Retired Pay Accrual)	Midway Blister Problem	Total O&S	PROCUREMENT COST AVOIDANCE SCN	WPN	Total Estimated Cost
1989										$0	$77
1990	$80	$0	$42	$123	$75	$12	$4	$213	$217	0	431
1991	161	0	85	245	150	24	0	419	256	0	674
1992	80	70	60	210	121	22	0	353	268	0	621
1993	0	139	36	176	91	20	0	288	192	0	479
1994	0	139	36	176	91	20	0	288	51	0	339
1995	0	139	36	176	91	20	0	288	(217)	0	70
1996	0	139	36	176	91	20	0	288	(256)	0	32
1997	0	70	18	88	46	10	0	144	(268)	0	(125)
TOTALS	$321	$696	$351	$1,368	$756	$150	$4	$2,279	$320	0	$2,598

TABLE III.4. CASE 3: ESTIMATED COST SAVINGS
(FISCAL YEAR 1988 DOLLARS IN MILLIONS)

BUDGET AUTHORITY

Fiscal Year	DIRECT O&S (O&MN,MFN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Indirect O&M,N	Indirect MPN (Retired Pay Accrual)	Midway Blister Problem	Total O&S	PROCUREMENT COST AVOIDANCE SCN	WPN	Total Estimated Cost
1989									$1,832	$245	$2,077
1990	$93	0	$136	$229	$141	$17	$4	$391			391
1991	187	0	271	458	282	34	0	774			774
1992	93	$81	271	445	267	34	0	746			746
1993	0	162	271	433	251	34	0	718			718
1994	0	162	271	433	251	34	0	718	(1,832)	(245)	(1,359)
1995	0	162	271	433	251	34	0	718			718
1996	0	162	271	433	251	34	0	718			718
1997	0	81	136	216	126	17	0	359			359
TOTALS	$373	$809	$1,898	$3,081	$1,821	$238	$4	$5,144	0	0	$5,144

OUTLAYS

Fiscal Year	DIRECT O&S (O&MN,MFN,WPN,OPN,APN) Coral Sea	Midway	Airwing	Total Direct O&S	Indirect O&M,N	Indirect MPN (Retired Pay Accrual)	Midway Blister Problem	Total O&S	PROCUREMENT COST AVOIDANCE SCN	WPN	Total Estimated Cost
1989									$110	$16	$126
1990	$80	0	$117	$197	$121	$17	$4	$339	311	79	729
1991	161	0	233	394	243	34	0	670	366	95	1,131
1992	80	$70	233	383	229	34	0	646	385	30	1,061
1993	0	139	233	372	216	34	0	622	275	10	907
1994	0	139	233	372	216	34	0	622	73	(16)	680
1995	0	139	233	372	216	34	0	622	(311)	(79)	232
1996	0	139	233	372	216	34	0	622	(366)	(95)	162
1997	0	70	117	186	108	17	0	311	(385)	(30)	(103)
TOTALS	$321	$696	$1,632	$2,649	$1,566	$238	$4	$4,458	$458	$10	$4,925

COST TO OPERATE THE MIDWAY BATTLEGROUP

In addition to estimating the potential savings available by retiring the Midway and Coral Sea aircraft carriers early, we were asked to calculate how much it costs annually to operate and support the Midway carrier battlegroup.

The Navy has classified SECRET the exact make-up of both the current and notional Midway carrier battlegroup. This data has been provided separately to the Committee. In general, however, in addition to the aircraft carrier, the current battlegroup is composed of surface combatants, attack submarines, support ships, a helicopter squadron, and an air wing composed primarily of A-6E and F/A-18 aircraft. The Midway-type notional battlegroup is composed of more capable surface combatants, submarines, a larger fleet of underway replenishment ships--along with helicopters--a larger helicopter squadron, and the same air wing as in the current configuration.

We calculated the annual operating cost in two different ways. We first calculated the estimated cost to operate the Midway carrier battlegroup as it is currently configured. This configuration costs about $1 billion annually to operate and support. We also calculated the cost to operate and support a notional Midway carrier battlegroup configuration. Outlays for this type of configuration would be about $1.4 billion annually for both direct and indirect costs. Funding requirements for the notional battlegroup are higher because this configuration incorporates the newer, larger, and more sophisticated escorts and helicopters found in Navy's fleet modernization plan. The total funding requirements also include the additional escorts and supply ships necessary to meet the notional requirements for the underway replenishment group

that accompanies the Midway. Budget authority would be somewhat higher than this due to the lower average spend-out rates for some accounts. These amounts are shown in table IV.1, below.

TABLE IV.1: SUMMARY OF ANNUAL COST TO OPERATE AND SUPPORT A MIDWAY BATTLEGROUP

Cost Category	Budget Authority		Outlays	
	Current	Notional	Current	Notional
	(Fiscal Year 1988 Dollars in Millions)			
DIRECT OPERATIONS & SUPPORT				
Military Personnel	$200	$280	$172	$241
Material & Other Services	524	747	451	642
Total Direct	$724	$1,027	$623	$883
INDIRECT OPERATIONS & SUPPORT				
Operations & Maintenance, Navy	$413	$567	$355	$488
Retired Pay Accrual	57	77	57	77
Total Indirect	$470	$644	$412	$565
TOTAL (a)	$1,194	$1,671	$1,034	$1,448

(a) Totals may vary due to rounding.

OBJECTIVES, SCOPE AND METHODOLOGY

Our objective was to determine the potential direct and indirect budgetary savings for fiscal years 1990 through 1997 that may result from accelerating the retirement of the Coral Sea and the Midway, and decommissioning a Midway-type air wing. This analysis included determining potential ship construction and other procurement savings available by delaying fiscal year 1989 plans by 5 years. In estimating procurement cost avoidances, we considered Navy acquisition plans, projected shortfalls of ships, aircraft, and weapons, and substitution between new and older class ships. We also estimated the total annual operating and support costs for both a notional and currently configured aircraft carrier battlegroup, separately identifying expenditures for the carrier, escorts and underway replenishment ships and aircraft. Our Midway-

type battlegroup estimates included direct and indirect operating and support costs in military personnel, operations and maintenance, and procurement accounts.

Data sources used to calculate direct and indirect costs, and procurement cost avoidances were:

-- Navy's Visibility and Management of Operating and Support Costs Total Support System reports for ships and aircraft (VAMOSC-Ships and VAMOSC-Air),
-- DOD budget justification documents,
-- Navy cost analysis documents,
-- Navy's program plan and extended planning annex,
-- Navy's March 1985 and October 1987 Surface Ship Combat Systems Master Plans, and
-- GAO report, Navy Ships: Status of the Navy's Fleet Expansion Efforts, GAO/C-NSIAD-88-3, October 27, 1987.

All cost data is shown in 1988 constant dollars using May 1987 inflation data from the "National Defense Budget Estimates for Fiscal Year 1988/1989" issued by the Office of the Assistant Secretary of Defense (Comptroller). Composite outlay rates were calculated using DOD data, taking into account expenditures that would occur from current year funding authority as well as funds authorized in previous years.

VAMOSC reports provide a comprehensive and readily available single source of actual operating and support expenditures for active ships and aircraft. VAMOSC data elements, collected from various budget and accounting reporting systems, parallel the operating and support costs elements and guidelines of the Office of the Secretary of Defense (OSD) Cost Analysis Improvement Group.

VAMOSC-Ships is an on line data base containing ten years of historical data. It contains direct operating and support

expenditures for 21 ship types by class and hull number with data broken down into 121 data elements. The Navy tests VAMOSC reports yearly when new data sources and/or formulas are introduced into the system. Our evaluation indicates that data elements are relatively accurate and historically consistent.

VAMOSC-Air data are collected and prepared annually as hard copy reports. These reports contain direct operating and support expenditures for every aircraft type, model, and series in the Navy inventory. Although the VAMOSC-Air reports are available from fiscal year 1975, the format and data elements are not historically consistent and only the data for fiscal years 1985 and 1986 meet Navy verification standards.

In estimating direct operating and support costs, we examined historical VAMOSC-Ships data for trends by taking 3, 4, and 5 year moving cost averages for both the Coral Sea and the Midway. The 5 year averages best smoothed out annual cost variances and were used for estimating direct operating and support costs and potential budgetary savings for all ship types and classes.

We identified annual operating and support cost data for all ships and aircraft in the Navy's current and notional Midway battlegroup configuration. At our request, the Navy's VAMOSC-Ships staff prepared a special report entitled "Total Support System Report" which presented fiscal years 1982 through 1986 operating and support expenditures, averaged by selected ship types and classes in our model. We aggregated cost data elements into three groups to show operation and maintenance, military personnel, and procurement expenditures.

All aircraft in the notional Midway air wing and on the carrier battlegroup escort and underway replenishment ships are represented in our model. Because historically consistent data were not available for aircraft operating and support costs, direct aircraft

operating and support costs were estimated using average fiscal year 1985 and 1986 VAMOSC-Air reports. Since the Midway battlegroup is home-ported in Japan, we used the Pacific Fleet cost data and weighted the variable costs by flying hours to calculate the 2 year average. Notional aircraft figures were multiplied by 1.5 to factor in additional operation and maintenance and procurement costs associated with fleet readiness squadrons, the maintenance pipeline, and attrition. A factor of 1.25 was used for additional military personnel costs.

Estimates of indirect operating and maintenance costs were developed from both VAMOSC and Navy budget data. Although VAMOSC reports accounted for almost all direct operating and support expenditures, VAMOSC captured only those costs that could be easily allocated to specific ships and aircraft.

We reviewed the Operations and Maintenance, Navy (O&M,N) budget justification data to determine whether direct and indirect costs were identified separately. Certain budget activities such as base operating support and real property maintenance were clearly distinguishable as indirect costs. Other budget categories, such as field operations and procurement support, contained a mixture of direct and indirect costs.

We compared data elements in the VAMOSC reports and the budget documents and found that the O&M,N budget line items do not correspond to the data elements in VAMOSC reports. However, after a detailed review of data elements, we could not identify any direct O&M,N expenditures that may have been omitted from VAMOSC reports.

Based on this analysis, and discussions with Navy and other financial managers, we concluded that it was reasonable to assume VAMOSC reports contained all direct operation and maintenance expenditures. Thus, we calculated total indirect O&M,N costs as the difference between total O&M,N budget outlays and VAMOSC operation and maintenance expenditures (for both ships and aircraft). The ratio between the total indirect O&M,N and the total VAMOSC operating and support outlays for fiscal years 1985 and 1986 was then applied to individual ships and aircraft in our cost model.

To estimate indirect military personnel costs we used military personnel line items in budget documents and VAMOSC data elements. We found that VAMOSC reported only 36 percent of fiscal year 1986 Military Personnel, Navy (MPN) expenditures. MPN line items indirectly associated with the operation and support of ships and aircraft omitted from VAMOSC reports included retired pay accrual as well as basic and special pay categories for those military personnel assigned to shore bases.

We calculated average retired pay accrual for officers and enlisted personnel assigned to the individual ships and associated aircraft. These calculations are based on fiscal year 1988 and 1989 budget justification documents which show that retired pay accrual equals about 50 percent of basic pay for all military personnel. Using actual fiscal year 1986 expenditures (inflated to fiscal year 1988 constant dollars) this indirect cost was allocated proportionally to individual ships and aircraft in our cost model.

Our estimates include payments from MPN to the military retirement fund, but exclude the retired pay accrual for military personnel assigned to shore bases that support the battlegroups. Because data does not distinguish between personnel directly supporting battlegroup operations and those that support other Navy functions

(e.g., research and development or procurement of new ships, etc.), our cost estimates also do not include the basic pay and special pays for military personnel assigned to shore bases. This resulted in a conservative estimate of potential savings for indirect MPN expenditures.

Several options existed for calculating the estimated reductions in the Navy's shipbuilding and munitions budgets. For example, for case II we calculated procurement savings taking into account shortages of both ships and munitions and substitution criteria. We estimated shortages by comparing current force levels with force requirements listed in the Navy's October 1987 Surface Ships Combat Systems Master Plan. Savings decreased when we considered shortfalls, but were unaffected when we considered substituting older ships for new ships. There were no munitions savings when we considered shortfalls.

In case III, we analyzed the potential budgetary savings in the Shipbuilding and Conversion, Navy (SCN) and Weapons Procurement, Navy (WPN) accounts assuming that (1) escorts and underway replenishment ships serving the Midway would be reassigned, and (2) fiscal year 1989 planned procurement of ships and munitions needed for the 15th battlegroup would be postponed until 1994. This savings option would produce outlay savings between 1989 and 1994, and also provide 4 years to meet the 1997 ship requirements. Outlay savings decrease sharply in fiscal year 1994 when ship expansion plans would resume. Procurement cost avoidance estimates consider offsetting expenditures in later years, but do not consider advance procurement funds appropriated in years prior to fiscal year 1989.

This analysis identified ships the Navy could avoid purchasing in fiscal year 1989 that are part of the notional battlegroup (as defined in the October 1987 Surface Ships Combat Systems Master

Plan) without considering whether any of these ships are in short supply. We also calculated the savings associated with postponing the procurement of ship munitions. These savings represent the value of threat munitions, self defense weapons and resupply on ships that, under this scenario, could be deleted from the fiscal year 1989 WPN budget plan.

Senator KENNEDY. Senator Cohen, who is our ranking minority member, has joined us. And we are pleased to have the ranking minority member of the full committee, Senator Warner, here.

We were going to hear from all the witnesses, and then try and get through the questions that we had and try to get reactions from all of them, and get as much exchange as we could given the time that we have available.

And so I would thank both of you. I am sure we will come back to you. And we would move to Major General Ryan from the Office of the Joint Chiefs of Staff.

STATEMENT OF MAJ. GEN. MARTIN J. RYAN, JR., DIRECTOR FOR FORCE STRUCTURE, RESOURCE, AND ASSESSMENT, OFFICE OF THE JOINT CHIEFS OF STAFF

General RYAN. Good afternoon, Mr. Chairman, and distinguished members of the committee. I am Major General Ryan, and I am the Director of Force Structure, Resource, and Assessment in the Office of the Joint Chiefs of Staff.

Before I begin my testimony, Mr. Chairman, I would like to submit to you, if I may, the Secretary of Defense's response to your letter of March 2 for the record.

Senator KENNEDY. Thank you very much. We will make that a part of the record.

Senator WARNER. Mr. Chairman, might that be duplicated?

Senator KENNEDY. That will be a part of the record.

[Letter inserted as part of Admiral Dunn's testimony. See page 8.]

General RYAN. I am very pleased as an Air Force officer to have an opportunity to speak to you this afternoon to discuss the Joint Chiefs opinion of the retirement of the aircraft carriers, *Coral Sea* and *Midway*, and what the impact that action would have on the ability of the United States to meet its peacetime, and of course potential wartime, requirements for aircraft deployments.

Let me begin by saying that Admiral Crowe, the Chairman, fully supports the Navy's stated force structure, which includes as its centerpiece a minimum of 15 deployable carrier battle groups.

We believe that it is a realistic force structure that properly considers very important issues, such as geographic constraints, our commitments to our allies, and most importantly, the Soviet threat.

A balanced force of 15 carriers is the core element of the administration's commitment to maintaining a maritime superiority necessary to fully execute our national strategy.

The requirement for a 15 deployable carrier battle group is an integral part of our national defense. But you certainly well may ask, where does that number come from?

The joint strategic planning document is a document used by the Joint Chiefs of Staff to advise the Secretary of Defense on their view of the world situation and the threat that it poses to our national security, and the Joint Chiefs of Staff recommendations on military forces that would be needed to counter that threat.

The size and the competition of our naval forces reflects the practical wisdom of supporting a two-ocean navy, the theoretical results of analysis and assessments that my office does, and the lessons learned from past experiences in combat experiences.

The requirement for a minimum of 15 deployable carrier battle groups to fight a war with the Soviets reflects what we have learned in past conflicts, and from deploying our naval forces in peacetime to the same places that we plan to deploy them in wartime.

For the purposes of deterrence, crisis management, and diplomacy, we must be present in a timely manner in many areas where we would have to fight if war broke out. Even though the peacetime operational tempo is about one-third the tempo that we would expect to encounter in wartime, we still have to cover about the same amount of area.

That experience has led us to setting the deployable carrier battle group requirement at a minimum of 15. We believe that our naval forces must be structured to accommodate the global scope of our Navy's task, and that brings me back to the point I made just a moment ago about considering geographic constraints when setting the requirement.

Experience over the years has established the minimum number of carrier battle groups required to respond to crisis situations, and to keep our global commitments by maintaining our normal forward deployed positions. We have learned that we cannot rely on a 1 or a 1½ ocean maritime force.

In the Atlantic theater, which encompasses the North Atlantic, the Norwegian Sea, the northern flank of NATO, including the Baltic throat, the Mediterranean Sea, the South Atlantic, the Caribbean, the Gulf of Mexico, the coast of South America and the West Coast of Africa, which are all vital lines of communication, our experience shows that we need approximately eight carrier battle groups.

Because of increasing commercial interests and security ties in the Pacific, as well as the Soviets' expressed intention to become a Pacific power, we believe we must be able to deploy to the Atlantic and the Pacific theaters simultaneously. We cannot depart one theater in order to solely support the other.

We have learned that we need approximately seven carrier battle groups to support our Pacific commitments, in the Western Pacific, the Indian Ocean, Southwest Asia, East Africa, and Persian Gulf areas, Southeast Asia as well as operations off Alaska, the

Bering Sea, the Aleutians, the Eastern Pacific, and of course the Mid Pacific region.

In a global conflict with less than 15 deployable carrier battle groups, we would be very hard-pressed to challenge the Soviets sea denial zones and to maintain essential lines of communication with Europe and Asia.

Force on force gaming results indicate that if all of the planned 15 carrier battle groups and all of the 4 battleship battle groups, to include all the required support forces, could be brought into play—and I might add that that is a very big "if"—the odds are that the United States can proceed with the necessary reinforcement and resupply of our forward deployed areas.

I must reemphasize, though, that the margins in those calculations are very thin. Without some corresponding reductions in carrier commitments, the absence of the *Coral Sea* and the *Midway* would require that other carriers pick up those commitments.

The immediate impact of this would be felt, since the *Coral Sea* is scheduled to deploy to the Mediterranean in the middle of 1989, and the present carrier deployment overhaul and carrier Service Life Extension Program schedules would have to be severely adjusted.

The remaining carriers would be required to deploy for longer periods of time and could expect to experience cocommitment problems of safety and decreased retention, resulting from stretching personnel and material beyond what we believe are prudent limits.

Even reducing the carrier force to 14 carriers would have a significant impact on sailors, their family, and the material readiness of the battle force units.

Further, our analysis has indicated that early retirement of the *Coral Sea* and the *Midway* will not appreciably, in the long term, reduce the direct O&M costs of a global carrier battle group operation since such things as fuel, ammunition, and spare parts would have to be apportioned to the remaining carriers. The relatively small real savings realized would not offset the adverse impact on personnel and readiness.

Finally, and perhaps the most compelling reason for maintaining 15 deployable carrier battle groups, is the enemy capability. The Soviet fleet has grown into an offensive, blue water force that is fully capable of providing the Soviet regime with a truly global reach.

Today, wherever our fleet goes, we usually find Soviet naval forces already there. The Soviets have placed great emphasis on achieving numerical superiority in their maritime forces, as well as increasing the quality of those forces.

I am referring now to quality advancements like very much quieter submarines, better missiles, enhanced electronic warfare capabilities, and of course the use of space for surveillance, communications, and navigation.

We expect naval advancements to lead the Soviet task groups of a decade from now that will be significantly superior to the capabilities that they possess today. We believe that it is evident that maritime strength plays a very prominent role in our national security strategy.

We are an island nation committed to a global alliance that faces a formidable maritime threat. Therefore, we must have naval forces to support our national objectives.

We believe it is equally evident that our experiences as the leading maritime nation in the Free World has led to a consensus among our military leaders that the requirement for 15 deployable groups is both prudent and supportable.

I thank you, Mr. Chairman, for the opportunity to appear before you this afternoon. Now as a group we stand ready to answer your questions.

[The prepared statement of General Ryan follows:]

PREPARED STATEMENT OF MAJ. GEN. MARTIN J. RYAN, JR., DIRECTOR FOR FORCE STRUCTURE, RESOURCE, AND ASSESSMENT, JOINT STAFF (J-8)

Mr. Chairman and distinguished members of the Committee, I am Major General Martin J. Ryan Jr., USAF, the Director for Force Structure, Resource, and Assessment, Joint Staff.

I am pleased to have this opportunity to appear before you to discuss the early retirement of the aircraft carriers *Coral Sea* and *Midway* and the impact this action would have on the ability of the United States to meet its peacetime and potential wartime requirements for carrier deployments.

Before I begin my remarks on that topic, I believe it will be helpful to provide some background information about J-8, the Force Structure, Resource, and Assessment Directorate of the Joint Staff.

J-8 is that portion of the Joint Staff responsible for developing forces, assessing warfighting capabilities, and making sure that the Service programs are prudently funding the systems, personnel, readiness and sustainability required to support our national military strategy as the CINCs plan to execute it.

My staff supports the Chairman and his representatives as they participate in the DOD Planning, Programming, and Budgeting System (PPBS). Our task is to provide the critical link between joint strategic planning and the programming and budgeting process. Where the PPBS is concerned, it is important to understand that J-8 does not duplicate the Services' tasks, but provides the Chairman with independent advice on Service programs to ensure they meet joint warfighting capability requirements of the Unified and Specified Commanders in Chief, or as we say, "the CINCs."

In looking at the strategic side of these questions, we attempt to provide a statement of military needs and risks without fiscal constraints. Further, we develop rough cost estimates for alternative force structures to support the process of matching limited resources with fiscally constrained strategies that accept higher risks.

And now, to the topic at hand, let me start by saying I support Navy's stated force structure, which includes as a centerpiece, a minimum of 15 deployable carrier battle groups. I believe it is a realistic force structure that properly considers important issues such as geographic constraints, our commitments to allies and, most importantly, the Soviet threat.

A balanced force of 15 deployable carriers is the core element of the administration's commitment to maintaining the maritime superiority necessary to execute fully our national strategy. The requirement for 15 deployable carrier battle groups is an integral part of our national defense; but where does the number come from?

Let me say that the JCS is an integral part of the PPBS system, and the JCS provides, in the first stage of the PPBS cycle, a Joint Strategic Planning Document. That document is used by the JCS to advise the Secretary of Defense on their view of the world situation, the threat that it poses to our national security, and the JCS recommendations on the military forces that would be needed to counter the threat.

The size and composition of our naval forces reflects the practical wisdom of supporting a two-ocean Navy, the theoretical results of analyses and assessments, and lessons learned from past exercises and combat experiences. The requirement for a minimum of 15 deployable carrier battle groups to fight a war with the Soviets reflects what we've learned in past conflicts and from deploying our naval forces in peacetime because we deploy now to the same places we must control in war. For the purposes of deterrence, crisis management, and diplomacy, we must be present, in a timely manner, in the areas where we would have to fight if war broke out. Even though the peacetime operational tempo is about one-third the tempo of war-

time operations, we still have to cover the same areas. That experience has led to setting the deployable carrier battle group requirement at a minimum of 15.

Our naval forces must be structured to accommodate the global scope of our Navy's task, and that brings me back to the point I made earlier about considering geographic constraints in setting this requirement. Experience over the years has established the minimum number of carrier battle groups required to respond to crisis situations and keep our global commitments by maintaining our normal forward-deployed positions. We have learned that we cannot rely on a one or one-and-a-half ocean maritime force.

In the Atlantic theater—encompassing the North Atlantic, the Norwegian Sea, the Northern Flank of NATO including the Baltic throat, the Mediterranean Sea, the South Atlantic, the Caribbean, the Gulf of Mexico, the coasts of South America, and the west coast of Africa (all vital sea lines of communications)—our experience has shown we need approximately eight carrier battle groups.

Because of our increasing commercial interests and security ties in the Pacific as well as the Soviets' expressed intention to become a Pacific power, we must be able to deploy to the Atlantic and Pacific theaters simultaneously. We cannot abandon one theater in order to deal with the other.

We have learned that we need approximately seven carrier battle groups to support our Pacific commitments in the western Pacific, the Indian Ocean, Southwest Asia, East Africa, the Persian Gulf area, and Southeast Asia as well as operations off Alaska, the Bering Sea, the Aleutians, the eastern Pacific, and the mid-Pacific region.

In a global conflict, with less than 15 deployable carrier battle groups, we would be hard-pressed to challenge Soviet sea denial zones and maintain essential communications lines to allies in Europe and Asia. Force-on-force gaming results indicate that if all of the planned 15 carrier battle groups and the 4 battleship battle groups, to include all required support forces, can be brought into play—that's a big if—the odds are that the United States can proceed with the necessary reinforcement and resupply of forward-deployed forces. I must reemphasize, however, the margins in the calculations are thin.

Without corresponding reductions in global carrier commitments, the absence of *Coral Sea* and *Midway* will require that other carriers cover their commitments. The impact of this would be felt immediately, since *Coral Sea* is presently scheduled to deploy to the Mediterranean in the middle of 1989 and the present global carrier deployment, overhaul, and carrier Service Life Extension Program (SLEP) schedules would have to be adjusted. Remaining carriers would be required to deploy for longer periods of time and could expect to experience concomitant problems of safety and decreased retention which result from stressing personnel and material beyond prudent limits. Even reducing the carrier force to 14 carriers would have an adverse impact on the sailors, their families, and material readiness of battle force units. Further, our analysis has indicated that early retirement of *Coral Sea* and *Midway* will not appreciably reduce the direct O&M cost of global carrier battle group operations, since the fuel and spare parts consumption of the remaining carriers will be increased. The relatively small real savings realized would not offset the adverse impact on readiness and personnel. Finally, the most compelling factor for maintaining 15 deployable carrier battle groups is enemy capabilities. The Soviet Fleet has grown into an offensive, blue-water force capable of providing the Soviet regime with a truly global reach. Today, wherever our fleet goes, Soviet naval forces are there.

The Soviets have placed great emphasis on achieving numerical superiority in their maritime forces as well as increasing the quality of those forces. I'm referring to advancements like quieter submarines, better missiles, enhanced electronic warfare capabilities, and the use of space for surveillance, communications, and navigation. We can expect Soviet naval advancements to lead to Soviet task groups of a decade from now that will be significantly superior to today's Soviet Navy.

I believe it's evident that maritime strength plays a prominent role in our national security strategy. We are an island nation committed to a global alliance system that faces a formidable maritime threat; therefore, we must have strong naval forces to support our national objectives. I believe it's equally evident that our experiences as the leading maritime nation in the free world has led to a consensus among our military leaders that the requirement for 15 deployable carrier battle groups is prudent and supportable

Thank you, Mr. Chairman, for the invitation to appear before you.

Senator KENNEDY. Maybe if the previous witnesses would be good enough to come to the table and hopefully we will have a

chance to get some interaction. We are going to try and adjourn by 3, and we will try and divide the time up. That is 40 minutes.

AIRCRAFT CARRIERS

I think the point that I would make at the outset, General Ryan, is that the amendment that I propose would not reduce the number of carriers, rather it would maintain them at the current level of 14.

The Navy now has 14 deployable carriers and plans to expand to 15 carriers in 1990, when the *Abraham Lincoln* is commissioned. The Kennedy amendment would merely defer the expansion to 15 carriers until the late 1990's by accelerating the retirement schedule for the two 40-year-old World War II carriers.

The idea is that the savings that would come from the early retirements would be utilized in other shipbuilding deficiencies which have been outlined, I think, in the earlier comments.

So the question really comes down to, the rate of expansion. That is what we are talking about. Whether a 7-year delay in expanding to 15 carriers will generate the savings that can be better used for more balanced Navy power projection.

A second issue is the magic number of 15 carriers. I think over the period of the last 20 years we have had a good deal of debate at the national level over appropriate carrier force levels.

In the past, both Republican and Democratic Secretaries of Defense have talked about 12 carriers. This administration has talked about 15. The Joint Chiefs of Staff have talked about more than 20. Obviously, 15 is better than 14, but not as good as 16.

The tradeoff really comes as to what savings you are going to get from deferring expansion from 14 to 15 carriers and what other needs are in terms of the Navy itself.

I do not know, Admiral Dunn or Admiral Nyquist, whether you feel that there is anything magic in the number 15. Is there some magic in that number?

Admiral DUNN. Well, certainly I agree with you that 16 is better than 15 and 15 is better than 14.

But the number 15 has been chosen, because that is the absolute minimum peacetime number we need in order to sustain things we have to do with the carriers without undue wear and tear on the ships, on the aircraft, and on the people.

I think General Ryan covered very well where we would use those 15 ships. At the present level of 14 we are overextending our people, and we are seeing that in terms of increased, or rather decreased retention, particularly among the aviators, but showing signs in the other ratings as well, and in increased maintenance costs because of increased wear and tear on the machinery. Fifteen would ameliorate that.

Senator KENNEDY. I want to address the issue of possible carrier substitutes. In my letter to the Secretary of Defense, I asked him to include an assessment of what alternative combinations of ships and aircraft might be deployed as a substitute for an aircraft carrier, either permanently or temporarily.

I am disappointed to see that in Secretary Carlucci's letter, which we just received, he does not discuss or even consider alter-

native ways of satisfying some of the requirements to be met by 15 carrier battle groups. Secretary Weinberger's response last November suffers from the same deficiency. I thought there might be combinations of land-based air, battleships, amphibious ships with Harriers that might meet our needs, at least in some circumstances, at least for some interim period of time. I would be interested whether both General Ryan and Admiral Nyquist could try to answer or give us some reaction to this.

Are there alternative combinations of ships and aircraft that might be deployed as a substitute for an aircraft carrier, either permanently or temporarily, in certain situations?

Perhaps you would talk about the battleships armed with cruise missiles being used in the convoy commitments in the gulf. I am also interested in the amphibious ships with Harriers. There have recently been two such deployments to exercise this new capability. Finally, there is the option of the land-based aircraft. You cannot always rely on the availability of land bases, but by the same token we cannot assume that land bases would never be available.

Admiral DUNN. Yes, sir. I will start, and then perhaps my colleagues will join in.

The fact is that in many scenarios there is no substitute for an aircraft carrier. The aircraft carrier is the only thing that can carry air to sea and achieve and maintain the air dominance necessary to do the other things at sea.

Whether those other things be launch carrier strike aircraft carrier, launch cruise missiles, launch marines, or in fact conduct antisubmarine warfare, we must have air dominance over the area in which we operate. We must have air dominance over those land areas which we want to support.

Where we can use land-based air we are more than glad to use land-based air. But history, recent history, has shown us that in many areas of the world land-based air is not available, for political reasons, for basing reasons, for a variety of reasons. So we take air to sea in our aircraft carriers.

Where we can use instruments other than aircraft carriers, we will. We are using instruments other than aircraft carriers in the North Arabian Sea now. But if it were not for that aircraft carrier operating in the North Arabian Sea, the air threat from those nations would probably be much more evident than it is now, since they know that an aircraft carrier is standing by ready to act in the event they use air against our forces.

BATTLESHIPS

Admiral NYQUIST. Mr. Chairman, when we debated bringing the battleships back in the early 1980's, one of its primary missions was to supplement our carrier battle groups, but always under the assumption that it would be in areas where the air threat was low. And if the air threat became higher, the assumption was that you would always have a carrier battle group available.

I think the same would apply for an amphibious task force. In all our plans dealing with amphibious task forces, we always include carrier battle group support for them.

So we do use the battleship battle groups to supplement. But as Admiral Dunn said, you must have air superiority in order to effectively use those battleships.

Senator KENNEDY. Well, my time is up. But just to sharpen this point, my question was not whether you would find alternatives for all use of carriers, clearly, but whether there is the combination of these alternatives that may be used in, as a substitute in some areas where the carriers are being utilized.

That would be where I would imagine that those alternatives would be utilized.

MEETING THE THREAT

Admiral NYQUIST. Yes, sir. We have structured the Navy that I described at the outset of 15 carrier battle groups and 4 battleship battle groups. All are required to meet the threat.

It is true that you can use the battleship battle groups in areas of less demanding air threat, and that has been our plan for the use of those battleships and that is how they are being used today. We are conducting battleship battle group exercises in conjunction with both sea- and land-based air.

Senator KENNEDY. Senator McCain. I do not know quite how to judge here. Senator McCain was the early bird. I was not in support of the early bird rule, but I was overruled.

Senator MCCAIN. In deference to my colleague's eloquence and erudite understanding of this issue, I would be glad to defer to him first, Mr. Chairman.

Senator COHEN. Well, if you strip the conditions away, I would be happy to move ahead. Let me make a couple of observations.

We have been through this debate in another forum and another time in a different context. A former colleague of ours, Senator Hart, for example, has raised issues similar to, not exactly identical, but similar to the issue being raised now.

SMALLER SHIPS VERSUS LARGER SHIPS

There it was a debate over smaller ships versus larger ships. Could we save money by having smaller aircraft carriers as opposed to 15 of the large deck ships?

And it was an interesting analysis because, for the most part, most military planners like to have lots of platforms. The more platforms, the greater the targeting obligations and responsibilities of the Soviet Union, or another potential adversary.

One factor that was almost consistently overlooked, however, was the survivability factor. When you have a smaller ship and more of them, perhaps less expensive, perhaps not, you have essentially a less survivable ship as well.

As I recall, a large deck carrier, has some 92 to 96 aircraft dedicated to it. A smaller aircraft carrier might, with a AV–8B Harrier, as Senator Kennedy has mentioned, have 38 to 42 aircraft, more than half of which would be dedicated to the defensive needs of that particular ship.

So in terms of the tradeoff, we would have, No. 1, a less survivable platform, but No. 2, one that is less capable of projecting

power. And this, it seems to me, is also tangential to the debate that is taking place today.

We tend to look at the savings without looking as much at the costs, what is involved in terms of the costs of doing what we are doing.

NATIONALISM AROUND THE GLOBE

I would raise the following question to the panel which Senator Kennedy touched upon just momentarily. How do we factor in the rising sense of nationalism taking place around the globe?

We are now talking about Spain, an integral part of NATO, but at what cost? They have just decided to kick out one of our air wings out of their country. Our bases in Greece are not all that secure in terms of where the negotiations will lead us. We have speculated in public hearings and private about the future of the Philippines, in terms of what our base rights are going to be.

It seems to me that we cannot conduct this kind of an exercise without taking into account, as hypothetical as they might be, the potential consequences of losing base rights around the globe, at this point, from friendly nations.

It seems to me that we have to take these factors into account as well. The only substitute that I am aware of for the loss of base rights is increased carrier production and deployment. Has the Navy taken into account any sort of contingency in terms of what we are going to need?

The Navy talks about the 15 carrier battle group as being the minimum necessary. I assume that is peacetime needs. If we are talking about an all-out conflict with the Soviet Union, a 15 carrier battle group that does not even begin to measure up.

I would assume the 15 carrier group means peacetime, and that includes Persian Gulf peacetime. Does it not?

Admiral DUNN. Yes, sir.

Senator COHEN. And what about the additional requirements of the Persian Gulf activities we have now? Have you factored that into the 15?

Admiral DUNN. Yes, sir. That is part of it.

General RYAN. If I might comment on that, sir. Admiral Hays, in his testimony earlier this year, said that in the Persian Gulf he could use an additional two carriers.

Getting back to the first part of your statement and our basing rights——

Senator COHEN. Well, the 15, based upon a current operating tempo in the Persian Gulf right now, with the added responsibility of defending the Kuwaiti tankers——

General RYAN. Yes, sir. He would like two more, if he could get them.

LOSS OF BASING RIGHTS

Going back to your earlier comment about perhaps loss of our basing rights, even with the basing rights that we currently enjoy, if you historically go back about 10 years you will find that in about 75 percent of our, what I will call crisis situations, we have

actively employed a carrier. That is with the basing rights we enjoy today.

Our forecast would be, as you pointed out, that we are probably going to lose basing rights. That would only make the participation of the carrier even more important.

We really only use the carrier for about four things. To establish a presence, to control crisis, to train with, and to fix and do maintenance, assuming there is no war. That is what drives our requirement for the 15 tankers.

All the numbers that have been thrown out are probably good, 12, 15, 16. But the denominator has to be, what is your requirement, what is your operational requirement going to be? What is your tasking going to be?

INDIRECT COSTS

Senator COHEN. Could someone clarify for me the indirect costs? Mr. Hale, or maybe Mr. Thurman. And I am sorry I missed your testimony. I was dealing with medical laboratory testing insufficiency. And that is kind of a big switch to get over here.

But could you tell me the indirect costs that you have been assuming? Senator Kennedy mentioned he would like to take the savings that might be generated or acquired as a result of retiring a ship early, and use them for other ship deficiencies that we currently have.

My understanding, and I must say I only read it quickly, but you assume some indirect costs by having fewer requirements for additional ships as a result of retiring. And that would seem to be somewhat inconsistent with what I heard.

Mr. HALE. Well, we show it both ways, Senator Cohen. We show the direct costs that we know, the fuel and so forth, associated with the carrier and the wing.

If you were to retire them, it is possible that you would also achieve some savings in training, in the number of people you need to have for medical care. Indeed, there might be some modest savings even in the whole management structure of the U.S. Navy. And those are the items we have tried to estimate in indirect costs.

They do require separate policy decisions. They would not automatically follow from retirement of the carrier. On the other hand, they should not be ignored. To make the point, if you retired all the carriers, you undoubtedly would save a whole lot.

So it is probably a step function. At some point you would achieve indirect savings.

Senator COHEN. Are you assuming a retirement of those individuals from the service, or just from deployment?

Mr. HALE. Well, we could do it both ways. I know the estimates we did—and also, I believe, the ones GAO did—showed you what would happen if the Navy took the people it would free up and used them for other missions, or if it dropped them out of the service. The big numbers up there assume they come out of the service.

Senator COHEN. And on the other types of cost savings, I assume you are associating it with a reduction in air wings?

Mr. HALE. Again, we showed them with and without that.

Mr. THURMAN. Yes.

Mr. HALE. But the big savings assume that a wing is retired.

Mr. THURMAN. The largest savings up there, Senator Cohen, assume that an entire wing is stepped down, retired, and not used.

Senator COHEN. Is this taking out the A–6?

Mr. THURMAN. No, sir. It would just assume that the entire wing, a *Midway*-type wing, displaces older aircraft and they are prematurely retired from the fleet.

That is what I alluded to when I said that would exacerbate the shortfall that already exists.

Senator COHEN. My time is up.

Senator KENNEDY. Senator McCain.

Senator MCCAIN. Thank you, Mr. Chairman. And I appreciate, as I mentioned beforehand, the very important remarks of my friend from Maine.

And I share his views, particularly on this issue of what we do if the bases go. And in addition to the areas that he cited, there is some real concern about our ability to maintain our bases in Turkey, because of our perceived, at least on their part, reluctance to fulfill our commitments to them.

But, Mr. Hale and Mr. Thurman, I want to congratulate you on a very indepth, and I think, effective and very well-done study.

I wonder if you were asked when you were tasked with these studies, if they wanted you to address any of the aspects of the strategic impact, commitments that we have around the world, the likelihood of what kind of commitments we would have to make in the event of a flareup of activities in Central America, et cetera.

Were you asked to address any of those?

Mr. THURMAN. No, sir.

Senator MCCAIN. Or even to address what commitments that this country has in the way of either formal or informal commitments or treaties throughout the world?

Mr. HALE. No, sir.

Mr. THURMAN. No, sir.

Mr. HALE. In fairness, Senator McCain, I think we would have been a lot less effective doing that.

I think that providing the numbers is CBO's role. I would not want to try to address those other matters for you.

Senator MCCAIN. I understand that. And I can imagine how difficult it is.

Our job, however, is to try and shape a budget that does meet those commitments. And ranging from the Carter doctrine, which has been a major factor in my view in keeping an aircraft carrier present in the Persian Gulf, which is not what we had planned on a couple of years ago. Am I correct, Admiral Dunn?

Admiral DUNN. Yes.

Senator MCCAIN. And the requirements that we have, including the enormous strain that this has put on men and women who serve in the military. And I understand there is no way you can quantify that either.

DIFFICULTIES IN RETAINING QUALIFIED PILOTS

But I would hope that at some point in your studies you would at least look at the numbers, at the difficulties we are having in re-

taining qualified pilots in both the Navy and the Air Force today, because that is a number you can quantify, $6 million per pilot to get a combat-trained pilot.

You start losing those in the hundreds, as we are facing, and that changes some of your numbers, in my view, somewhat significantly.

But I do think, I want to compliment you again on a very thorough, indepth study, given the parameters that you were asked to conduct those studies under. And I appreciate the information, it will be very helpful to me.

Although I was, Mr. Hale, a little bit amused at your statement. You said retiring aircraft earlier than now planned would permit fuller utilization of remaining carriers.

Indeed, you are right. They will utilize them in the Persian Gulf, and in the Indian Ocean, and in the Pacific, and in the Mediterranean. And all those places happen to be away from the United States, and that is away from where the young men and women live who serve on board those carriers and as part of those air wings. But I also understand that point that you are making.

INEFFECTIVENESS OF "MIDWAY" AND "CORAL SEA"

Admiral Dunn, what is the Navy's view of the argument, as it was made by Mr. Hale, that it cannot use the *Midway* and *Coral Sea* effectively because it will be some 160 to 170 aircraft short of its support goals?

Admiral DUNN. *Coral Sea* and *Midway* have just completed deployments. *Midway* is presently operating off Korea, on her way back to her home port and *Coral Sea* is just south of the Azores on her way back to her home port in Norfolk.

Both of those carriers were equipped with first line aircraft and they did a first line job. Each carrier deploying will also be similarly equipped with adequate aircraft.

This gives me an opportunity, in answer to your question, to mention something Mr. Hale said. He talked about fixing the inventory shortfall with crossdecking. That is true. But we are not shorting any particular air wing by crossdecking.

Instead, we are taking extra numbers when we need them. We would take extra numbers when we needed them in event of full-scale war from training squadrons and from pipeline, and that sort of thing. So we do have other places to get extra airplanes.

The 167 or whatever number of aircraft we are short overall is significant in that we would like to conduct routine maintenance and have an airplane available every time we have to train someone.

But given the fiscal situation, given the risk that we have to take, we have adequate numbers of aircraft to man all of our aircraft carriers, either as they deploy in peacetime or simultaneously if we should have to get all 15 underway in wartime.

SUPPORT SHIPS

Senator MCCAIN. Do we have the support ships and aircraft necessary to support a 15-carrier battle group force, with the exception of the DDG–51s?

Admiral DUNN. Yes, sir.

Senator MCCAIN. What needs to be done in the case of the DDG–51s?

Admiral NYQUIST. Senator, we need to get on with building five to six a year.

And, as I said in my oral statement, in the later years of our 1988–1989 5-year shipbuilding plan, we do reach that five to six number. But we need to get on to replace the older guided missile destroyers.

Senator MCCAIN. What is our present rate of acquisition?

Admiral NYQUIST. We came to the Hill this year with three in the 1989 budget. We had none in 1988, because we completed the cruiser line, and we built five *Aegis* cruisers in 1988. The amended budget had three in 1989.

Senator COHEN. If the Senator would yield, for your information the House yesterday knocked off a Trident and added two more destroyers. So they are up to five now, but at the cost of a Trident.

Senator MCCAIN. Thank you. My time has expired. Mr. Chairman, I would just like to say, in closing I would like to thank all the witnesses for a very important testimony here.

And I also hope that this subcommittee could address this issue. Not just the subcommittee, but the entire Senate, and in particular our full committee on this issue of what our commitments are.

And if we cannot afford those commitments, I would suggest that we carry out a policy such as might be recommended here, reducing the number of ships.

At the same time, if we are not going to reduce those commitments, I think it is a great disservice to our people to try and strain them to the degree, as we have in the past, where they are not only unable to perform the obligations of meeting those commitments, but also we are unable to retain them, the qualified men and women, with the problems we have experienced in the past.

And I thank you for holding this hearing today, Mr. Chairman.

Senator KENNEDY. Senator Symms.

Senator SYMMS. Thank you, Mr. Chairman. I share much of what Senator McCain just said.

REDUCING THE NUMBER OF CARRIERS

Admiral Dunn, I wanted to get into the specifics of this. If, in fact, we reduce the number of carriers, how much time does that add on to the deployment for the current carriers? Or did you cover that already in your testimony?

Admiral DUNN. No, sir. I did not cover that. It is hard to say exactly what the commitments will be in the future, because we do not know what sort of crisis will erupt and how we would have to sail the carriers out of sequence.

But I do know that over the past 2 years, from April 1, 1986 to March 31, 1988, the 14 deployable carriers we had at that time averaged roughly 250 days underway.

If we were to reduce a carrier, that would be 250 ship days that would have to be taken up by some other ship.

Senator SYMMS. What is the retention rate of your young lieutenants and lieutenant commander aviators right now?

Admiral DUNN. It depends a little bit on what community they are in. For those who fly off aircraft carriers, the retention is down in the neighborhood of 35 percent, and it seems to be decreasing.

Senator SYMMS. That is your retention rate?

Admiral DUNN. Yes, sir.

Senator SYMMS. And is it not usually true that it is the pilots that you start losing first, and then others follow?

Admiral DUNN. That is absolutely right, yes, sir.

Senator SYMMS. So, in other words, having less carriers is going to make that problem worse.

Admiral DUNN. That is exactly right, sir. With commitments as they are, without reduction of commitments, if we assume commitments remain the same, the carriers we do have will have to steam that much more.

That will cause people to be away from home more. The number one reason for people leaving the Navy, whether it be pilots or enlisted people, is family separation. We exacerbate that family separation, and more will leave.

That brings up the question of indirect costs, if I may. We will, I submit, actually have to train more people because we will have a greater through-put of people. As we recruit them, train them, deploy them, and they get out, then we have to recruit more, train them, and they get out.

CARRIER PEACETIME REQUIREMENTS

Senator SYMMS. Well, Admiral, could you explain to me how the peacetime requirements for the 15 carriers is determined?

Admiral DUNN. Yes, sir. I would defer to General Ryan on that.

General RYAN. Sir, roughly, in very short terms, it is about eight in the eastern——

Senator SYMMS. I cannot quite hear you, General.

General RYAN. It is approximately eight in the Atlantic, the Atlantic theater, if you will, and about seven in the Pacific theater.

TENURE OF DEPLOYED CARRIERS

Senator SYMMS. Well, what are our commitments in the tenure of the deployed carriers? I mean, how much time in overhaul, how long does it take to overhaul one now?

General RYAN. I am going to have to defer the overhaul question back to my friends in the Navy.

Admiral DUNN. Our nominal deployment is 6 months, Senator, from home port to home port. That is what we attempt to achieve as a maximum deployment, with about a 1-year turnaround.

Now, during the 1 year between deployments there is an awful lot of time at sea. And then every 5 years the carrier will go into an extended overhaul, which will last somewhere around 13 months.

In the case of nuclear carriers, when that nuclear carrier needs refueling, it takes a longer period of time.

Senator SYMMS. But while you are in the training period in port, that is when you are preparing before you deploy, so hopefully when you do actually make the deployment you are at full strength and fully operational and ready to go to war, if necessary.

Admiral DUNN. Yes, sir. Of course, Senator, you are not in port during that training period.

Senator SYMMS. But it takes a lot of preparation, because you are out under way, practicing.

Admiral DUNN. Yes, sir.

CARRIER PILOT TRAINING COSTS

Senator SYMMS. But if we are down to 23 percent of retention of the carrier pilots, what does it cost to train a carrier pilot now, to get to where he is prepared to be an F–14 pilot, say?

Admiral DUNN. The cost, until he is finished with the fleet or replacement squadron, fully day and night carrier-qualified in the F–14, is about $1.2 million.

Now, Senator McCain said $6 million, and I am not sure, with all due respect, sir, that must be a very well-trained pilot. [Laughter.]

Senator MCCAIN. That is what it costs to train me. [Laughter.]

Senator SYMMS. Now, $1.2 million.

Admiral DUNN. Yes, sir. That is from the time he enters the door at Pensacola, goes through the flight training, goes through a fleet replacement training squadron, has become fully proficient in the weapons system of that aircraft, and is day and night carrier-qualified.

Senator SYMMS. But that is just, the guy is really still green as grass.

Admiral DUNN. He is what we call a nugget. He has just checked into the squadron. He has to be polished.

Senator COHEN. That is the way we feel about Senator McCain right now. [Laughter.]

Senator MCCAIN. I resent this line of questioning. [Laughter.]

Senator SYMMS. Now, I want to just throw this question back over to General Ryan.

SAC PILOT TRAINING COSTS

I was told the other day it costs about $4 million to train a pilot for SAC. Is that correct?

General RYAN. Yes, sir. That is approximately correct.

Senator SYMMS. Is that because of the cost of the aircraft they are flying is more expensive?

General RYAN. Yes, sir. Operating costs for B–52 aircraft are very expensive per hour. We are down to about 52 percent retention in the Air Force now of pilots, in the strategic area.

Senator MCCAIN. I believed it was the commander of the military airlift command who told us that it was $6 million for his pilots.

General RYAN. Yes, sir. That would be to qualify in a C–5 or a C–141. His retention rate is down to about 27 percent.

Senator SYMMS. Thank you very much. I think we have got a serious problem here.

I would say to my colleagues, and to those at the table, the cost of this is going to become inordinately higher. Something needs to be done right now to reverse that or I think we are in trouble.

Thank you, Mr. Chairman.

Mr. HALE. Could I make a brief statement on the cost? I do not want to get involved in the commitments debate. I think that is better conducted by others.

But the costing we did assumed that the tempo of operations stayed the same. We would be keeping the same number of carriers we had today, and therefore it seemed reasonable to use current budget relationships.

I think the Navy has said they need another $30 million, on that order, for pilot bonuses to correct the problems you foresee. And it may be fair to add those numbers into the cost. But I think it would be wrong to multiply the pilots we are losing somehow by $1 million or $6 million and say we need to add those numbers into these costs.

Moreover, the indirect cost savings—though you could certainly argue whether they would be realized—are consistent with keeping a tempo of operations at the same level. And that is really what the amendment that we costed out assumed.

Senator KENNEDY. Senator Cohen.

Senator COHEN. I just want to make one final observation, and I thank all the witnesses for their testimony.

LOW-THREAT AREAS

In trying to determine costs or make certain assumptions of current operating tempos and current commitments, one thing has changed rather radically in just the past 2 or 3 years, I can recall just 2 or 3 years ago we were talking about perhaps having some sort of compensatory deployments in low-threat areas.

I do not know where there are low-threat areas today. I made a list to myself. The Falklands, I assume some would feel that is a low-threat area. The British found out quite differently. Iraq, Iran, Cuba, Libya.

The proliferation of antiship missiles by other nations, the Chinese selling Silkworms, the French selling various forms of their antiship missiles, the Saudis we have learned from the newspapers are now deploying a ballistic missile system in the Middle East.

It seems to me that we have to take into account the fact that the world is changing very rapidly. We cannot make just current assumptions of current requirements—notwithstanding your analytical requirements—we cannot make these kinds of decisions without taking into account how, number one, the globe is shrinking, the technology is miniaturizing the world, and number two that there are no low-threat areas around the globe any longer. I think the U.S.S. *Stark* was a stark reminder of that fact.

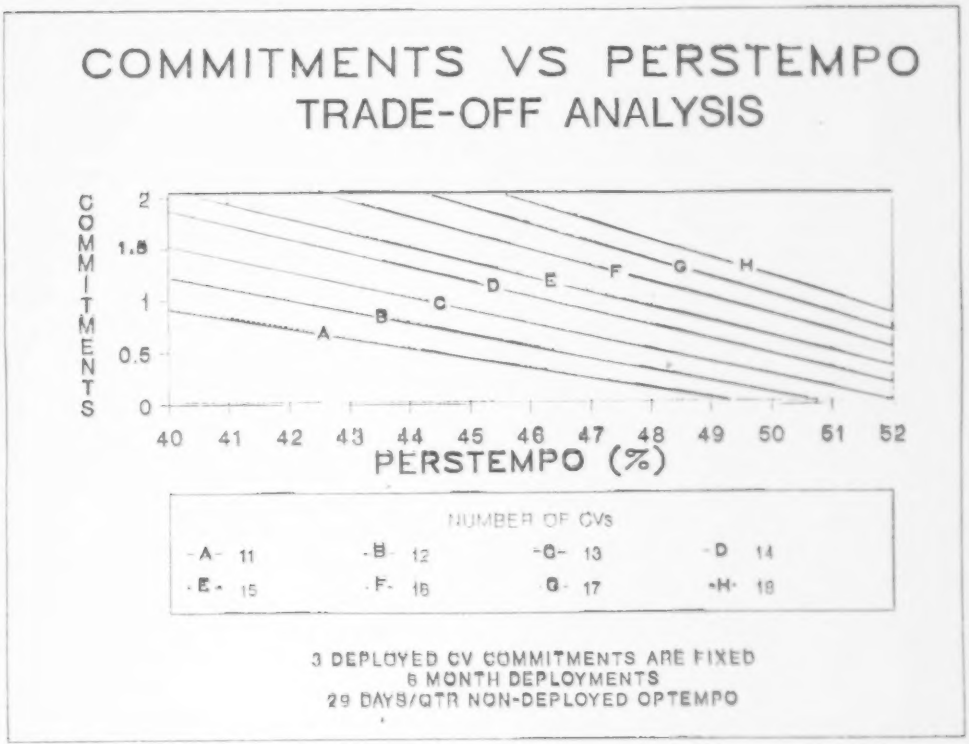
Senator KENNEDY. I might point out, though, with the Silkworm missiles we are facing at the Straits of Hormuz, we have used a battleship in there to try and deal with that. So I think the point is in terms of the areas of low-level conflict, I do not know whether the case is completely made that the aircraft carrier is the only weapon. But let me just make a couple of points.

One is in reference to an earlier comment about my questioning. I was not, in pursuing the line of questions on Harriers aboard amphibious ships, endorsing Senator Hart's ideas about small aircraft carriers. The question we have now is whether we have a balanced

Navy force, both in surface ships and air, as well as submarines. And whether the balance will be, helped by an additional carrier now or whether we need to increase the allocations of resources in other areas such as aircraft and surface ships.

On another issue I want to put in the record, a chart on PERSTEMPO, which is a measure of the time that sailors are away from home. As I understand it, this chart is provided by the Navy. It shows that with a 13-carrier force, 44 percent of the time is at home. And with 14, it is 46 percent, and with 15 it is 47 percent.

[The information referred to follows:]



Senator KENNEDY. I do not think any of us would have anything but the utmost understanding and recognition of the extraordinary service that those men who are on the carriers give, when they were away from home for long periods of time. This is a real strain upon them and upon their families.

But I think in this chart, if it is correct, the amount of time that we find for both the pilots and others to be back with their families does not vary dramatically between 14 and 15 carriers.

Let me sum up. We have learned that savings of anywhere from $1 billion to $5 billion will be achieved if the Navy keeps its carrier force level at 14, deployable ships, instead of 15. Two marginally effective World War II carriers could be retired and the savings could be used to help fund their replacements, or be available to offset the serious current shortfalls in surface ships and tactical aircraft.

We have heard how serious these shortfalls are from the last four annual reports to Congress by the Secretary of Defense. Those

reports explicitly predict the shortfalls of AAW cruisers and destroyers, because adequate numbers of new ships were not programmed.

This shortfall is a critical one, since these ships are the principal battle force units, charged with defending the carriers.

There is also a shortfall in tactical aircraft whose primary mission is protecting the carriers and other ships. That shortfall may be as high as 190 planes.

Based upon a 15-carrier Navy, many of us on this committee have serious questions about the fighting effectiveness of a Navy so critcially short of combat ships and planes.

At least since 1984, the Navy has never programmed for its surface combatant requirements. In 1985, the Congressional Budget Office and Congressional Research Service started sounding the warning bells on this issue.

In 1987, the General Accounting Office and CBO brought our attention to Navy aviation shortfalls as well. It is difficult to pretend that these shortfalls are linked to the budget reductions generated by the current fiscal climate.

Now, an obvious gap exists between the Navy's goals and its request. This is not a new phenomenon. The gap is bound to widen under current budget pressure. The time has come to concentrate on quality and the achievement of an effective fighting force. That means retiring older, marginally effective ships in order to apply the savings to new construction.

The key to the edge we have with our potential adversary is our ability to introduce new technology. Sacrificing old technology to pay for the new is smarter than hanging on to the old to meet an arbitrary goal.

This approach may mean a slightly smaller Navy, but one with larger and more affordable building programs. And it may mean using our forces more creatively to cover commitments. The Navy needs to have flexible forces, not forces trapped in static deployment patterns, similar to garrison forces.

The approach suggested by last year's amendment results in a level of 14 deployable carriers, one less than desired by the Navy, for a period of about 7 years. That level is two more than we had 7 years ago when the Indian Ocean carrier commitment was developed.

And the fact is we are not even at 14 deployable ships today. But we soon will be there, thereby relieving much of the existing pressures on operation.

The Navy needs to carve $93 billion out of the last 5-year plan submitted to Congress. And today's unbalanced force is unnecessarily fat on carriers. We are critically short on cruisers, destroyers, and combat aircraft.

The Navy tells us that holding the carrier force to a level of 14 rather than 15 entails great risk, but it is hard to see how the Navy strategy can meet the current combat shortfalls.

As the Navy tightens down with the rest of the Pentagon, it can ravage its manpower accounts, slow down research and development, cut readiness and sustainability, or it can choose to get into balance with a high-quality effective fighting force. I hope it will

choose the latter. The Nation needs a Navy in fighting trim, and not an unbalanced array of 600 ships, not fit to fight.

I would yield to Senator McCain.

Senator MCCAIN. Thank you, Mr. Chairman. I just might note that in the chairman's statement, among other things I notice you said this Navy should not be in a static situation similar to garrison forces.

I would look forward to working with the chairman in determining where those forces might be reduced, whether they be out of the 6th Fleet or the Far East or perhaps the Indian Ocean.

I had not heard that the battleships were going to be the response to the Silkworm missile. Had you any information on that, Admiral Dunn?

Admiral DUNN. No, sir.

Senator MCCAIN. That is very interesting information, though.

I also would like to point out to Mr. Hale, if I might, I guess you think that $30 million would take care of the pilot shortage problem, or the Navy has told you that. But did you factor in the indirect costs, the costs of replacing those pilots, if we do lose them? Did you factor that into your analysis?

Mr. HALE. We did not include even the $30 million, Senator McCain. If it does solve the problem, then we would not have to replace them. That presumably is the goal of those extra bonuses.

Senator MCCAIN. Thank you. One other question. General Ryan, I know that it is classified as to what the JCS feels is the minimum number of carrier battle groups that we should have.

Perhaps you could tell us whether the number is more or less than 20. [Laughter.]

General RYAN. Sir, I will be happy to do that in private at the end of this hearing.

Senator MCCAIN. Thank you. And my information is, in an unclassified fashion, that the minimum required is significantly more than what we have planned for.

And again we go back, and I am just sounding like a broken record, as to what our commitments are. If we are willing to reduce those commitments, then I think we should indeed reduce those numbers of carriers.

But to reduce the numbers of carriers before we reduce the commitments that this country has, simply does not make sense from any standpoint, and leaving the personnel aspect of it aside.

I would look forward to meeting with our allies and say, now all of you will take care of the Persian Gulf. We will be able to draw back to the Mediterranean and our traditional role, and we will have the Japanese or whoever else wants to take up that burden. The Far East the same way. The Mediterranean, the same way.

And then I think we should look seriously at dramatically reducing not only our number of carriers but support ships involved.

But to make a case that we should now reduce the numbers of aircraft carriers before we are able to reduce those commitments, I think, does not compute. But I think it is also rather risky.

Thank you, Mr. Chairman.

Senator KENNEDY. The only point I want to emphasize is that deferring the addition of a 15th carrier by 7 years, is not a reduction of the existing carrier force levels.

I want to thank all of you very much. It has been very helpful. I think we have got a good record, particularly with the complete statements. And we will leave the record open in case there are any additional questions from our members.

So I want to thank you all very much.

[Questions for the hearing record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR J. JAMES EXON

CARRIER DEPLOYMENTS AND RETENTION

Senator EXON. One of the Navy's arguments for having 15 deployable carriers is that a lesser number means longer and more frequent overseas deployments. This, in turn, reduces retention, morale and the materiel readiness of our ships. Can you tell us now or provide for the record the retention figures the Navy experienced onboard its carriers, in its airwings and in its battlegroup escorts when it had 12 carriers, 13 carriers and with its present force? Do these figures in fact confirm that the higher the operating tempo, the lower the retention? Is it lowered by a significant amount?

Admiral DUNN. A direct correlation between the number of carriers and retention cannot be made because it is impossible to hold other variables constant. These variables are the economy in general, airline hiring in particular, wage comparability with the private sector and time at sea. However, recent studies make it clear that family separation is the number one dissatisfier for naval officers and their primary reason for leaving the Navy. This is true for our pilots despite the fact that job satisfaction is high. If we were to reduce the aircraft carrier force by two, and if world commitments were kept constant, family separation would increase by 6 percent. Increased family separation, by any reckoning, would result in decreased retention.

Senator EXON. What other factors would come into play in this?

Admiral DUNN. The major factor in the retention of aviators is airline hiring rate. In 1982 the airlines hired 1,330 pilots and Navy pilot retention was 42 percent. In 1987 the airlines hired over 9,000 pilots and Navy retention was 35 percent. Pilots find the shorter family separation periods of the airlines, a stable lifestyle and lucrative income more attractive. Studies show that naval aviators experience high job satisfaction, and in periods of low airline hiring, tend to stay in the Navy. In order to compete for these million dollar assets, we must provide an attractive compensation package, a stable benefits package, and send a consistent signal of Navy and congressional support.

HOW CARRIERS OPERATE

Senator EXON. When a carrier is not deployed overseas, what is it doing? What percentage of its nondeployed time is spent at sea on training missions, fleet exercises, and exercises with our allies? Does this change at all with an increase or decrease in the number of carriers?

Admiral DUNN. Aircraft carriers are funded at 50.5 days at sea per quarter for deployed units and 29 days at sea per quarter for nondeployed units. Following CNO's guidelines for operational tempo, ships spend 2 days nondeployed for every day deployed. Averaged out, these figures equate to 144 days per year spent at sea.

Nondeployed ships spend one-third of their time in restricted maintenance availabilities, one-third in upkeep and one-third at sea conducting exercises with its air wing and other battle group units. Exercises with allies are normally, but not always, conducted when deployed.

NOT ENOUGH AIRCRAFT

Senator EXON. One of the arguments used against the 15 carrier goal is that to get there, the Navy cannot afford to buy the necessary number of aircraft and replace aging aircraft.

Is there a shortfall in carrier-based aircraft? How serious a problem is that in peacetime? In wartime?

Admiral DUNN. Based on fiscal year 1989 APN the following carrier-based aircraft shortages are projected. The requirement includes USMC/USMCR requirement for carrier-based Type Model Series aircraft.

	1988	1989	1990	1991	1992	1993	1994	1995
Pipeline	323	332	333	338	350	350	350	348
Requirement	2,083	2,148	2,175	2,223	2,317	2,330	2,342	2,356
Inventory	2,045	2,126	2,161	2,155	2,160	2,234	2,296	2,296
Delta	−38	−22	−14	−68	−157	−96	−46	−60

Deltas are based on full requirements including pipeline. Large deltas in fiscal year 1991 through fiscal year 1993 are a result of inventory shortfalls in the F/A-18 and S-3A. The F/A-18 shortfall is due primarily to the transition of the last eight A-7E squadrons in fiscal years 1991-92. These transitions are concurrent with CV/CVN F/A-18 conversions. New F/A-18C Bureau Numbers are identified for these squadrons. The S-3A shortfall will continue to grow to 49 aircraft by the end of the FYDP.

The 94 aircraft requirement increase in fiscal year 1992 is caused by the transition from the *Coral Sea* to *Roosevelt* air wing on U.S.S. *Abraham Lincoln* (two F-14 squadrons, one S-3 squadron, plus additional A-6, E-2C, and EA-6B aircraft), the standing up of one USMC F/A-18D squadron, and transitioning two reserve squadrons from incompatible aircraft.

In peacetime carrier-based aircraft shortfalls will continue to be managed by proven initiatives of minor force adjustments, selective utilization of USMC squadrons in carrier air wings, and delay of modernization programs. In wartime more aircraft could be made available with pipeline reductions. The seriousness of inventory shortfalls in wartime would be dependent on and directly tied to combat losses.

Senator EXON. To what extent can the Marine Corps airwings operate from our carriers? Could they not be used to some degree to make up any shortfall in naval aircraft? Are these airwings not available today?

Admiral DUNN. All USMC squadrons flying carrier-based Type Model Series aircraft have the capability of flying from our aircraft carriers. USMC F/A-18, A-6, and EA-6B squadrons have routinely deployed with carrier airwings and are programmed to continue to do so on a limited basis through the FYDP.

QUESTIONS SUBMITTED BY SENATOR JOHN MCCAIN

SUPPORT SHIPS AND AIRCRAFT

Senator MCCAIN. Don't we already have all of the support ships and aircraft necessary to support a 15 carrier battle group force? Isn't it true that the only major problem we will face is the need to step up the construction rate for DDG-51s? What would it cost to correct this deficiency and would retaining the *Midway* and *Coral Sea* still be valuable if we are unable to fund additional DDG-51s?

Admiral DUNN. All of our carrier battlegroups deploy with a full complement of aircraft and sufficient surface combatants and support ships to carry out their roles and missions. However, we do have [deleted] but this would require $735-$1,400 million additional funding in the shipbuilding account each year for the next 10-15 years. In any case, reducing CV levels below the 15 currently planned would further degrade the Fleet's AAW capability, as well as its strike capability, and impact on our ability to carry out the maritime strategy.

EARLY RETIREMENT OF "MIDWAY" AND "CORAL SEA"

Senator MCCAIN. What effect would early retirement of the *Midway* and *Coral Sea* have on the number of days at sea of the remaining carriers?

Admiral DUNN. Aircraft carriers are budgeted for 50.5 days at sea per quarter for deployed carriers and 29 days at sea when in a nondeployed status. If *Coral Sea* and *Midway* were retired early, effectively reducing the carrier force to 145 deployable ships, their commitments would have to be covered by the other active carriers. This translates to approximately 144 days per year. Each carrier will spend at least 7 percent more time at sea. In actuality, because of deployments, work-ups, and depot maintenance requirements, one third of the CV/CVNs will spend an additional 31 days at sea each year.

Senator MCCAIN. What increases in cost would take place?

Admiral DUNN. Since commitments for the remaining carrier force would remain the same, operating costs would remain the same. However, the extra wear and tear

on propulsion and auxiliary equipment would increase and maintenance costs would be expected to escalate.

Senator McCain. What would be the impact on pilot retention and other key areas of manpower?

Admiral Dunn. Increased OPTEMPO caused by the early retirement of *Coral Sea* and *Midway* would likely have an adverse effect on retention in all categories. Both officers and enlisted cite family separation as the most influential factor in their decision to leave the Navy, and as a result, reducing OPTEMPO has been a major retention initiative within the Navy.

Senator McCain. What increases in cost would be necessary to retain the necessary personnel?

Admiral Dunn. It is difficult to isolate the effect of any one factor in the decision to leave the Navy. If, however, the increased family separation caused by early retirement of two carriers causes only a 5 percent reduction in pilot retention, the annual hours required to offset this reduction would be an additional $4,500 per aviator retained. Under the current bonus targeting scheme, a steady state increase of approximately $12.5 million in AOCP would be required. Enlisted retention would likely suffer comparable losses with attendant increases in Selective Reenlistment Bonuses (SRB) required.

Senator McCain. What is the Navy's view of the argument it cannot use the *Midway* and *Coral Sea* effectively because it will be some 160–172 aircraft short of its force goals?

Admiral Dunn. The Navy does project significant carrier based aircraft shortfalls in fiscal years 1992 and 1993. However there are sufficient aircraft to fully support 13 active and 2 reserve airwings.

Based on fiscal year 1989 APN the following carrier based aircraft shortage are projected. The requirement includes USMC/USMCR requirement for carrier based Type Model Series aircraft.

	1988	1989	1990	1991	1992	1993	1994	1995
Pipeline	323	332	333	338	350	350	350	348
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The 94 aircraft requirement increase in fiscal year 1992 is caused by the transition from the *Coral Sea* to *Roosevelt* air wing on U.S.S. *Abraham Lincoln* (two F-14 squadrons, one S-3 squadron, plus additional A-6, E-2C, and EA-6B aircraft), the standing up of one USMC F/A-18D squadron, and transitioning two reserve squadrons from incompatible aircraft.

Carrier based aircraft shortfalls will continue to be managed by proven initiatives of minor force adjustments, selective utilization of USMC squadrons in carrier air wings, and delay of modernization programs. In times of crisis, pipeline reductions are possible.

Senator McCain. Given the savings postulated by the CBO and GAO, could the Navy cost-effectively build-up to 15 carrier battle groups in the mid-1990s if it made the kind of manpower, aircraft, ship, and other cuts necessary to achieve the higher levels of savings projected in these studies? Would these types of savings prevent the Navy from building up to 15 carrier battle groups?

Admiral Dunn. Given the force level reductions postulated in the CBO and GAO studies, the Navy could not rebuild to a 15 carrier battle group level without considerable time delays. The effective reduction to a 14 deployable carrier force level will have an effect upon recruiting pilot and NFO training rates, schoolhouse pipelines and ship construction plans for carriers as well as support ships.

Assuming the Navy was directed to rebuild to a 15 carrier level in the mid-1990s would require a minimum of 6 years due to the lead time required to construct CVNs.

Senator McCain. Does the Navy feel it could benefit from making trade-offs by using the savings from early retirement of the carriers for other aspects of military capability like readiness or modernization?

Admiral Dunn. Battle group units and aircraft carriers, as the centerpieces of the carrier battle groups, are normally the first ships to receive upgraded readiness and modernization features. With a reduced battle group force level and the same commitments, battle group ships would be expected to spend more time away from port and a commensurate higher level of wear and tear on equipment. The short term result of reducing the number of carriers would be a steady decline in readiness; the long term impact would be an ever-increasing toll on our sailors and their equipment.

Senator McCain. What kind of military risks does the Navy project if early retirement of the *Midway* and *Coral Sea* were carried out in the way postulated in the CBO and GAO studies?

Admiral Dunn. The coming years will present unprecedented challenges to U.S. interests (i.e. increasing Soviet influence/presence, worldwide economic conditions, illicit narcotics trade, Third World unrest, weapons proliferation, etc.). Recent events have shown that the carrier battle group is increasingly the force-of-necessity. Early retirement of the *Coral Sea* and *Midway*, as postulated by the GAO and CBO studies, would result in a 7 year delay in attaining the necessary 15 carrier battle group force. Combat readiness and flexibility would be reduced—which translates into increased vulnerability. Therefore a variety of military risks would be inevitable during this 7 year period. At risk would be:

(1) Meeting numerous, vital commitments to our friends and allies:

(2) Retaining the people necessary to man the fleet with acceptable skill levels.

(3) Maintaining our surge capability to meet contingencies.

(4) Honoring our treaty obligations.

In a global conflict with less than 15 deployable carrier battle groups, we could be hard-pressed to challenge Soviet sea denial zones and maintain essential communications lines to allies in Europe and Asia. Force-on-force gaming results indicate that if all of the planned 15 carrier battle groups and the 4 battleship battle groups, to include all required support forces, can be brought into play—a big if—the odds are that the United States and its allies can gain ultimate control of the vital sea areas and that the United States can proceed with the necessary reinforcement and resupply of forward-deployed forces. However, the margins in the calculations are thin.

Senator McCain. What changes in the proposed study requirement does the Navy think would make the results more useful?

Admiral Dunn. The study conducted by the Navy and other agencies shows only the costs associated with the early retirement of aircraft carriers. Unfortunately, the question of the requirement for aircraft carriers was never asked.

History records the value of the aircraft carrier as an instrument of foreign policy. It has been used in more than 75 percent of the crises we have responded to in the last 10 years. Reducing our planned force level to 14 carriers, given the requirement to repair and maintain ships when not deployed, may impair our ability to deploy in response to crises.

No other combination of ships and aircraft brings to the task the ability to project power and provide air dominance where needed. We have always known this, but recently it has become increasingly evident as our basing rights throughout the world continue to diminish.

[Whereupon, at 3:05 p.m., the hearing was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1989

TUESDAY, APRIL 12, 1988

U.S. SENATE,
SUBCOMMITTEE ON PROJECTION FORCES
AND REGIONAL DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

STRATEGY MOBILITY ISSUES

The subcommittee met in open session, pursuant to notice, at 2:19 p.m., Senator Edward M. Kennedy (chairman) presiding.

Present: Senators Kennedy, Exon, Warner, and Symms.

Staff present: Carl M. Smith, staff director for the minority; and Kathryn E. Bognovitz, special assistant; Brian D. Dailey, William E. Hoehn, Jr., Norman G. Mosher, and Mark B. Robinson, professional staff members; Lori M. Jackson, staff assistant.

Also present: Jeffrey B. Subko, assistant to Senator Exon; William J. Lynn, assistant to Senator Kennedy; Milton D. Beach, assistant to Senator Glenn; Terrence Lynch, assistant to Senator Shelby; Christopher Mellon, assistant to Senator Cohen; and Samuel J. Routson, assistant to Senator Symms.

OPENING STATEMENT OF SENATOR EDWARD M. KENNEDY, CHAIRMAN

Senator KENNEDY. I apologize to our witnesses for being late. We had our usual caucuses on this day and our distinguished majority leader made a very moving statement for his reasons to step aside as the majority leader. So we took some additional time for our particular caucus to terminate. So I apologize at the very beginning to our witnesses. We will now come to order.

Today we will examine the capability of the United States to provide for the early heavy resupply and reinforcement to our forces projected overseas in a contingency. This capability is for possible contingencies in Europe, the Persian Gulf, or any other part of the world.

General Otis, Commanding General of the U.S. Army in Europe, was invited to be here today, but prior commitments in Europe prevented him from being here. He has provided written testimony which we will enter into the record at this time.

[The prepared statement of General Otis follows:]

STATEMENT BY

GENERAL GLENN K. OTIS

COMMANDER IN CHIEF, UNITED STATES ARMY, EUROPE

INTRODUCTION:

MR. CHAIRMAN, I APPRECIATE THE OPPORTUNITY TO PROVIDE THE INFORMATION YOU REQUESTED ON THE ARMY'S NEED FOR SEALIFT TO REINFORCE AND SUSTAIN U.S. ARMY FORCES IN EUROPE. AS YOU INDICATED IN YOUR INVITATION, THE U.S. ARMY IN EUROPE IS THE "USER" OF THESE SERVICES. SINCE THE U.S. TRANSPORTATION COMMAND AS THE "OPERATOR" IS ALSO PROVIDING INFORMATION TO THE SUBCOMMITTEE, THESE REMARKS ARE LIMITED TO THE ARMY "USER" REQUIREMENTS. THERE IS ONE SALIENT POINT: ADEQUATE SEALIFT IS VITAL TO THE ARMY'S ABILITY TO ACCOMPLISH IS NATO MISSION, BECAUSE MORE THAN 90% OF THE CARGO FOR WAR MUST COME BY SEA. IT IS SAFE TO SAY THAT U.S. ARMY'S ABILITY TO SUPPORT NATO IN DETERRING WAR OR, IF NECESSARY, TO FIGHT AND WIN, RESTS ON ADEQUATE SEALIFT. IN OTHER WORDS, THE ARMY IS READY--WE JUST NEED TO GET THERE.

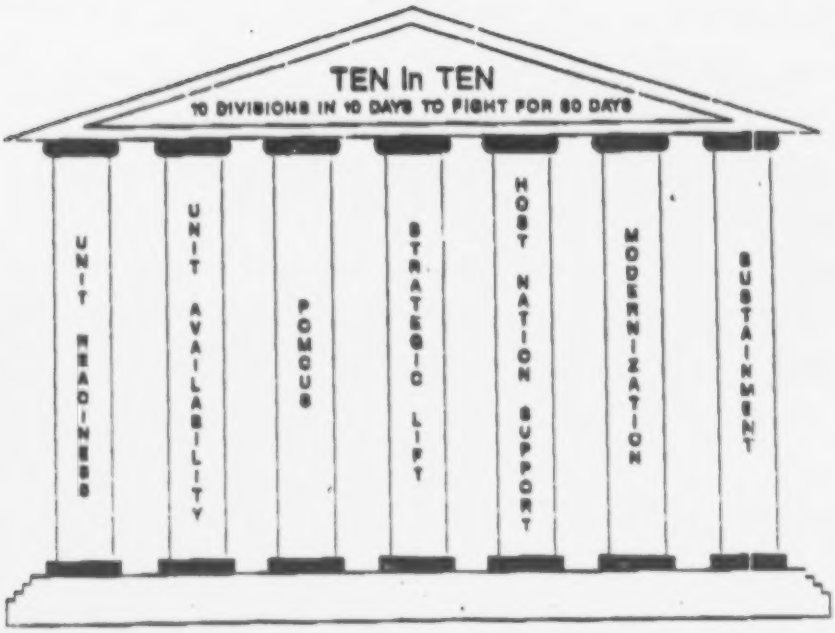
THE OVERALL U.S. REINFORCEMENT PLAN FOR NATO CALLS FOR OVER 20 U.S. ARMY DIVISIONS TO BE COMMITTED TO EUROPE WITHIN THE FIRST FEW MONTHS OF A CONFLICT. THE SPECIFIC NUMBERS CAN BE FOUND IN THE CLASSIFIED SUPPLEMENT TO THIS PAPER. HOWEVER, THE MOST CRITICAL REINFORCEMENT REQUIREMENT IS TO MEET THE NATIONAL COMMITMENT TO PROVIDE ALLIED COMMAND, EUROPE TEN DIVISIONS WITHIN TEN DAYS OF A DECISION TO REINFORCE. THIS COMMITMENT IS REFERRED TO AS THE "10-IN-10" FORCE.

FOUR DIVISIONS OF THE 10-DIVISION FORCE ARE CURRENTLY STATIONED IN EUROPE IN PEACETIME. THE REMAINING SIX REINFORCING DIVISIONS MUST DEPLOY FROM THE UNITED STATES. THE

OPTIMUM SOLUTION IS FOR THE SOLDIERS OF THESE SIX DIVISIONS TO FLY DIRECTLY TO EUROPE, CARRYING ONLY THEIR PERSONAL EQUIPMENT AND WEAPONS AND DRAWING THEIR HEAVY EQUIPMENT AND VEHICLES FROM PREPOSITIONED STOCKS IN EUROPE TO BE READY FOR OPERATIONS WITHIN A FEW DAYS.

WE HAVE MADE CONSIDERABLE PROGRESS IN MOVING TOWARD THIS GOAL WITH AN OVERSEAS EQUIPMENT STORAGE PROGRAM CALLED POMCUS: PREPOSITIONING OF MATERIEL CONFIGURED TO UNIT SETS. UNIT EQUIPMENT SUCH AS TANKS, ARTILLERY PIECES, AND TRUCKS IS STORED IN BATTALION- AND COMPANY-SIZE PACKAGES IN A READY-FOR-USE CONDITION IN EUROPE. HOWEVER, FOR A VARIETY OF REASONS, SUCH AS COST AND STORAGE LIMITATIONS, APPROXIMATELY ONE-THIRD OF THE EQUIPMENT BY TYPE OF A POMCUS DIVISION IS NOT AUTHORIZED FOR PREPOSITIONING. IN ADDITION, A SIGNIFICANT PORTION OF THE AUTHORIZED POMCUS EQUIPMENT IS ACTUALLY NOT IN STORAGE BECAUSE OF LACK OF FUNDS, LACK OF WAREHOUSES, AND OTHER REASONS. AS A RESULT, THE ARMY STILL REQUIRES MOST OF THE AVAILABLE AIR AND A LARGE AMOUNT OF FAST SEALIFT JUST TO MEET THE INITIAL "10-IN-10" COMMITMENT.

BEYOND THE 10-DIVISION FORCE, THE REMAINING FOLLOW-ON REINFORCEMENTS MOVE 100% OF THEIR EQUIPMENT BY SEA; WHICH, ALONG WITH THE SUSTAINING SUPPLIES FOR ALL U.S. FORCES, CREATES VERY LARGE DEMANDS FOR SEALIFT. GENERAL GALVIN, THE SUPREME COMMANDER OF ALLIED FORCES IN EUROPE AND THE COMMANDER IN CHIEF OF THE U.S. EUROPEAN COMMAND, USES A CHART SIMILAR TO THE ONE BELOW TO ILLUSTRATE THE "10-IN-10" REQUIREMENT AND THE PRIMARY FACTORS NECESSARY TO ACHIEVE THAT GOAL. THE PEDIMENT OF THE BUILDING HERE REPRESENTS THE GOAL; THE COLUMNS REPRESENT THE SUPPORTING FACTORS.



I WILL NOT DESCRIBE EACH PILLAR, KNOWING THAT THE INTEREST OF THIS SUBCOMMITTEE IS STRATEGIC SEALIFT. BUT IT IS IMPORTANT TO UNDERSTAND THAT THESE PILLARS ARE NOT INDEPENDENT. THE SUPPORTING FACTORS ARE INTERRELATED. MEETING THE "10-IN-10" COMMITMENT REQUIRES BALANCED AND SYNCHRONIZED EFFORTS. IT IS NOT EFFECTIVE TO FOCUS ON JUST ONE PILLAR--SUCH AS STRATEGIC LIFT--BY ITSELF. TO BRING TEN COMBAT-READY DIVISIONS INTO EUROPE AND SUSTAIN THEM DEMANDS THAT EACH PILLAR CARRY ITS OWN WEIGHT.

HOWEVER, I DO BELIEVE THAT STRATEGIC LIFT IS A KEY PILLAR. FOR EXAMPLE, IT CURRENTLY TAKES APPROXIMATELY THREE TIMES THE 10-DAY GOAL TO MOVE THE SIX REINFORCING DIVISIONS TO EUROPE. THE EXACT TIMES ARE AVAILABLE IN THE CLASSIFIED SUPPLEMENT. THE SOVIETS KNOW THIS VERY WELL. THEREFORE, THE CAPABILITY THROUGH INCREASED SEALIFT TO DEPLOY TEN DIVISIONS TO EUROPE IN TEN DAYS WOULD BE A VERY REAL DETERRENT.

STRATEGIC LIFT REFERS TO BOTH AIR- AND SEALIFT. PEOPLE

ARE EASILY MOVED BY AIR, BUT HEAVY ARMY EQUIPMENT SUCH AS TANKS AND ARTILLERY CONSUMES LARGE AMOUNTS OF STRATEGIC AIRLIFT. THIS HEAVY EQUIPMENT CANNOT BE MOVED BY AIRCRAFT OF THE CIVILIAN RESERVE AIR FLEET BUT REQUIRES SCARCE AIR FORCE C-5 OR C-141 AIRCRAFT.

I DO NOT BELIEVE THAT LACK OF AIRLIFT IS A MAJOR PROBLEM NOW, ASSUMING OF COURSE, THE ADDITION OF THE C-17. THE PROBLEM AS SEEN FROM THE VIEWPOINT OF AN ARMY "USER" IS THE LACK OF ADEQUATE FAST SEALIFT AVAILABLE EARLY ENOUGH TO MOVE THE ARMY'S HEAVY EQUIPMENT.

AS AN ARMY COMMANDER, I WILL NOT ATTEMPT TO ADVISE THIS SUBCOMMITTEE OR THE NAVY ON WHAT TYPE OF SHIPS TO BUY, SL-7, SURFACE EFFECT SHIPS, OR OTHERS. I WILL ONLY STATE THE ARMY'S NEEDS TO MEET THE NATION'S ANNOUNCED NATO COMMITMENT. THE ARMY'S FIRST REQUIREMENT FOR THE REINFORCEMENT OF NATO IS THE AVAILABILITY OF AN ADEQUATE NUMBER OF SHIPS TO LOAD, RAPIDLY TRANSIT, AND DELIVER UNIT EQUIPMENT OF THE "10-IN-10" FORCE WITHIN TEN DAYS OF A REINFORCEMENT DECISION. THE FOLLOW-ON REQUIREMENT IS FOR AN ADEQUATE NUMBER OF THE RIGHT TYPE OF SHIPS IN SUFFICIENT TIME TO SUSTAIN AND RESUPPLY THE COMMITTED ARMY FORCE. AS I INDICATED EARLIER, IMPROVEMENTS IN ALL THE PILLARS, SUCH AS UNIT AVAILABILITY, POMCUS, AND AIRLIFT, WILL HELP; SO WILL TIMELY DECISION MAKING AND OTHER FACTORS. BUT THE SOLUTION TO
THE "10-IN-10" PROBLEM REQUIRES INCREASED FAST SEALIFT. WE NEED A "SEA BRIDGE" TO EUROPE.

AS THE NEXT TWO CHARTS SHOW, FAST SEALIFT IS THE MOST RESPONSIVE AND MOST COST-EFFECTIVE METHOD OF MOVING LARGE AMOUNTS OF HEAVY EQUIPMENT AND SUPPLIES RAPIDLY.

CHART 2, "DEPLOYMENT TIMES," COMPARES SEALIFT DEPLOYMENT

TIMES TO EUROPE TO THE TOTAL NUMBER OF AIR SORTIES THAT COULD BE GENERATED DURING A SIMILAR PERIOD OF TIME.

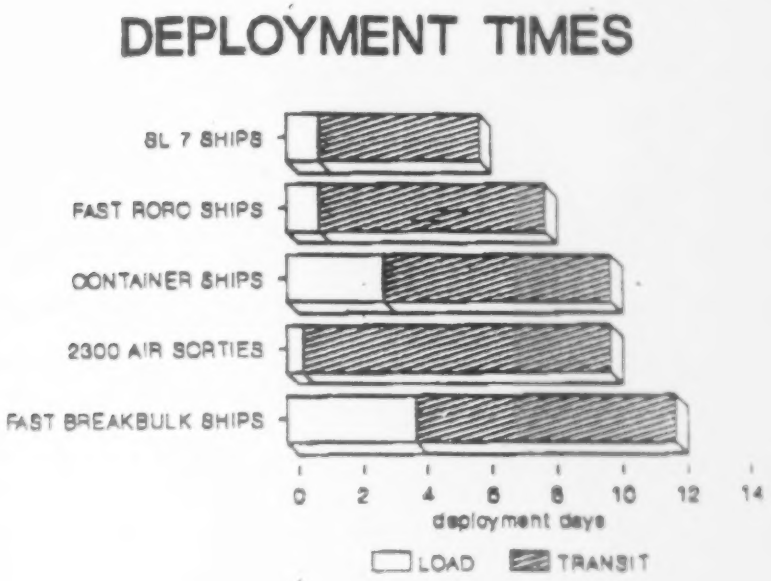
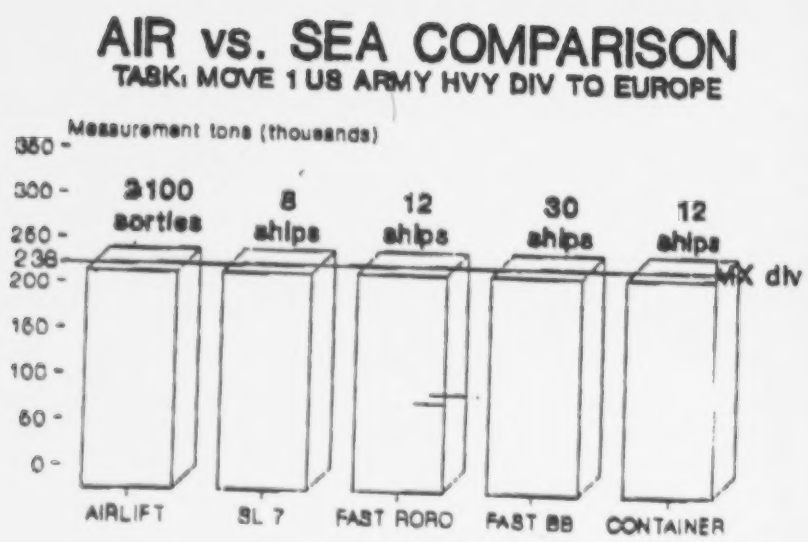


CHART 3 TIES CARGO-CARRYING TO THE SHIPS AND AIRCRAFT IN THE PRECEDING CHART. THE 238,000 MEASUREMENT TONS REPRESENTS THE MOVEMENT REQUIREMENTS OF A SINGLE U.S. ARMY MECHANIZED DIVISION. THEREFORE, IT WOULD REQUIRE 2,100 C-5 AND C-141 SORTIES TO MOVE THIS TONNAGE BY AIR. AND, OF COURSE, WE HAVE ONLY 102 C-5S AND 251 C-141 AIRCRAFT IN THE U.S. AIR FORCE INVENTORY. THE COLUMNS TO THE RIGHT SHOW THE NUMBER AND TYPE OF SHIPS REQUIRED TO MOVE THE EQUIVALENT TONNAGE.

THE POINT MADE HERE IS THAT MOVEMENT OF HEAVY ARMY EQUIPMENT BY SEA IS THE MOST EFFICIENT AND TIMELY METHOD OF DEPLOYMENT. IF FAST SEALIFT IS AVAILABLE TO MOVE HEAVY UNIT EQUIPMENT, AIRLIFT CAN BE UTILIZED MORE EFFICIENTLY TO COMPLETE THE TOTAL FORCE DEPLOYMENT OF ALL THE SERVICES.



IN SUMMARY, I WOULD LIKE TO STRESS THAT THE UNITED STATES MUST IMPROVE ITS CAPABILITY TO MEET THE AMERICAN COMMITMENT TO PROVIDE ALLIED COMMAND, EUROPE TEN DIVISIONS IN TEN DAYS. AT PRESENT, WE CANNOT FULFILL THIS MISSION FOR A NUMBER OF INTERRELATED REASONS SUCH AS UNIT AVAILABILITY, LEVEL OF POMCUS FILL, AND AVAILABILITY OF STRATEGIC LIFT. EACH OF THESE FACTORS NEEDS TO BE ADDRESSED IN A CONCERTED MANNER. IMPROVEMENTS IN ONE AREA, SUCH AS STRATEGIC LIFT, MUST BE ACCOMPANIED BY IMPROVEMENTS IN THE OTHERS TO MAKE REAL PROGRESS IN MEETING THE "10-IN-10" COMMITMENT.

LET ME AGAIN EMPHASIZE THAT THE SINGLE MOST CRITICAL FACTOR IS SEALIFT; SPECIFICALLY, READILY AVAILABLE FAST SEALIFT. IF THE NATION HAD AN ADEQUATE QUANTITY OF READILY AVAILABLE FAST SEALIFT, IT WOULD HAVE A TREMENDOUS IMPACT ON THE CAPABILITY OF THE ARMY TO DEPLOY, FIGHT, AND SUSTAIN ITS FORCES IN EUROPE. THIS INCREASED CAPABILITY FOR RAPID STRATEGIC REINFORCEMENT TRANSLATES INTO INCREASED DETERRENCE AND, IF NECESSARY, INCREASED WARFIGHTING CAPABILITY. THE BEST ADDITION I KNOW TO OUR DETERRENT POSTURE WOULD BE THE DEMONSTRATED CAPABILITY TO TRANSPORT A QUICK-REACTION FORCE

WITH ITS PEOPLE AND EQUIPMENT BY AIR IN A

SINGLE LIFT, FOLLOWED BY FAST SEALIFT CARRYING THE HEAVY

WARFIGHTING EQUIPMENT OF TANKS, HELICOPTERS, ARTILLERY, ETC.

WE KNOW HOW TO DO IT, WE HAVE THE FORCES WITH WHICH TO DO IT.

WHAT REMAINS IS TO MAKE THE RELATIVELY MODEST INVESTMENT IN

SEALIFT TO COMPLETE THIS STRATEGIC DETERRENT PACKAGE.

Senator KENNEDY. As General Otis states:

Adequate sealift is vital to the Army's ability to accomplish its NATO mission, because more than 90 percent of the cargo for war must come by sea. It is safe to say that the U.S. Army's ability to support NATO in deterring war or, if necessary, to fight and win, rests on adequate sealift. In other words, the Army is ready—we just need to get there.

The chart that is displayed here is a representation of the problem that we are exploring this afternoon. The requirements for tonnage of warfighting material may differ according to the region.

But for each, there is a gap in our ability to meet the requirements. Just how large this gap is has been the subject of many studies and is an issue that we will explore today. But all indications are that we have an important shortfall in our capability which can only be corrected by a force of fast sealift ships.

U.S. forces sent overseas in a contingency would look for support from material prepositioned forward, either on the ground in the theater or afloat in maritime prepositioned ships. Initially, they could expect support from airlift, both military and civilian, as the Civil Reserve Air Fleet is called into service. This support is quick and substantial, but inadequate for the heavy or prolonged fighting.

Airlift is essential to move men quickly to prepositioned equipment and to move light divisions to far-flung trouble spots. But sealift is required to sustain them. Heavy lift aircraft can deliver in hours, not days. Still, the combined lift capacity of present and planned airlift resources cannot substitute for fast sealift.

For example, we are in the midst of a $40 billion program to buy a fleet of new C–17 airlifters. But it would take more than 200 C–17 sorties to transport the equipment carried aboard a single ship.

As the chart shows, total airlift assets, actual and planned, can move less than 10 percent of our strategic lift requirement. The other 90+ percent must come by sea.

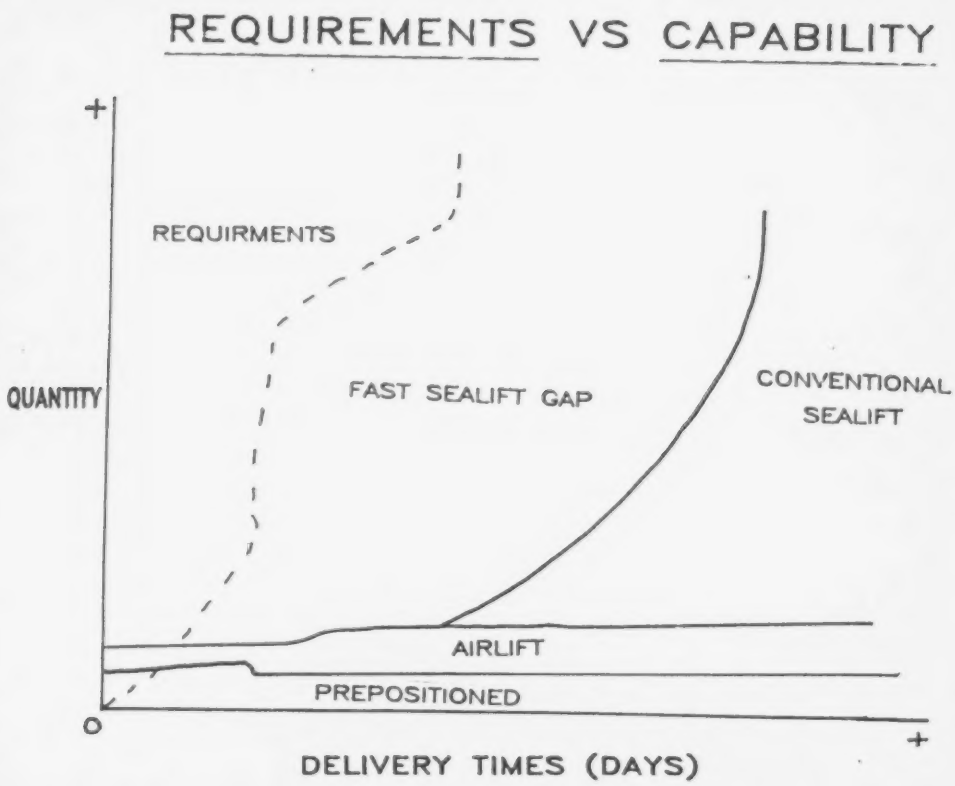
The critical question with sealift is how soon the first increment arrives. Troop needs can quickly outstrip the ability of airlift. Sooner or later, ships diverted from other purposes or brought out of the Ready Reserve will be loaded and sail, but there must be ships dedicated to early reinforcement and resupply to fill the gap between airlift and sustaining sealift.

The fast sealift ships required for this mission may or may not be commercially viable. These ships have a primary mission of

military support and ought to be a subject of our immediate concern here.

Gen. Duane Cassidy, commander in chief of the U.S. Transportation Command, is here today to discuss operational needs for fast sealift. Vice Adm. Stanley Arthur, Deputy Chief of Naval Operations for Logistics, and Mr. John Gaughan, Administrator of the Maritime Administration, Department of Transportation, are also here to tell us who has the responsibility to develop fast sealift and what is being done to provide that capability.

I think the issue is really presented in this chart. It is a rough but accurate depiction of our requirements for lift and our capability to meet those requirements with airlift, prepositioned equipment, fast sealift and conventional sealift. The chart shows that we have a very sizable and significant gap in fast sealift. That is something that we need to address.



I might just mention that the attention that has been given to fast sealift has waxed and waned. In the early 1970s, the fast deployment logistics ship was proposed, but never built. In the late 1970s, the administration made a dent in the problem with the acquisition of the SL-7 fast sealift ships. But the need for additional fast sealift was identified at the beginnings of this administration in the 1981 congressionally mandated mobility study. We are now nearing the end of the administration, which has been marked by substantial real growth throughout the Defense budget, but there

has been no progress in meeting our fast sealift needs. We want to address that issue.

Senator Warner, do you have any opening comments?

Senator WARNER. I thank the Chair and I commend him for this hearing. Indeed, this subject is one that I have followed for 15 years, and I am anxious to hear from the witnesses.

Senator KENNEDY. Thank you.

Senator Exon, do you have any comments?

Senator EXON. I have no opening comments except to welcome our witnesses here today. This is something that many of us have worked on here today for a long, long time.

I congratulate you for calling this hearing, Mr. Chairman. And I am looking forward to the testimony and then very likely will ask some questions. Thank you.

Senator KENNEDY. Thank you.

General Cassidy.

STATEMENT OF GEN. DUANE H. CASSIDY, U.S. AIR FORCE, COMMANDER IN CHIEF, U.S. TRANSPORTATION COMMAND

General CASSIDY. Thank you, Mr. Chairman and committee members. I am very pleased once again to be before you. I am no stranger to any of the members of the committee.

I am wearing a little different hat in the role that I have assumed just recently with the U.S. Transportation Command. We ran the flag up on this new Unified Command on October 1 of this past year, and the command is alive and well. It is being embraced by the services, well supported by the Secretary of Defense, and, in fact, I believe we will have an affect as you, the Congress, and as our President has suggested we should have.

I provided you with a lengthy statement for the record. May I take a few minutes to summarize some of what I believe to be the most important parts of that written statement.

I know this committee appreciates that finding out how much transportation is enough and whether or not we have enough is not as clear-cut as we would like it to be. And if I may, I would like to speak to all of transportation, the several elements of transportation up front, and then talk specifically to some of the sealift issues as I view them from the Transportation Command as I finish up.

What I find out, frankly, sir, is that there is good news and bad news. We have made, as you said, some very dramatic improvements in the last several years in our ability to move things. The services have funded and, with your support, we have indeed made good improvement in several areas that will enhance our ability to do whatever the job is.

The bad news is that we are seeing some declines in some areas that we just simply cannot tolerate and that we as a body, you and us working together, must do something about. Specifically in sealift, which we all know will be the component of my command that will carry the bulk of the transportation burden, that is in a protracted conflict, and, of course, in sealift we have seen some retrenchment or some backing away of the artificial goal we established with the congressionally mandated mobility study of several years ago.

We cannot, however, just focus on what our jargon calls lift platforms. As the commander in chief, I cannot ignore the ports. I must dwell on the needs of our people, which indeed is the most important equation, the most important part of the transportation equation, and how they live in the society today, their quality of life in that society. And I have got to be concerned about how we command and control what we have. We know there is not enough and therefore we must not waste what we have, and command and control is absolutely essential to make sure that that does not occur.

We cannot indeed waste what we have. Our command is different from any other command in that we have a unique relationship with the civilian sector. We are absolutely dependent upon them, and we must have them to project national power. The health and well-being of the commercial transportation industry, that is airlift and sealift, trains, and trucks, is as important to me as the organic forces that I command.

Our most immediate concern will be the rapidly deteriorating maritime industry, particularly in light of General Otis' comments about our ability to fulfill our commitments of 10 divisions to Europe in 10 days.

I believe the solution to the maritime problem is to treat it as a national problem, put together a national effort, a coordinated national effort between the Department of Defense, the Department of Transportation, with the participation of the civil sector, including the union shop owners, shipbuilders, an effort which will only come to pass with the full understanding and support of you, the Members of our Congress.

Lest we focus only on sealift, though, let me make some specific comments on the other elements first and then, as I said, I will finish with a comment on sealift. We have indeed made great progress toward the congressionally mandated mobility study goal of 66 million ton miles per day for airlift.

We have stretched the C-141. We now have in the fleet 25 new C-5s. We will take delivery of the final, the 50th airplane, next year in 1989. We have a full complement of KC-10's.

We are well into the Civil Reserve Air Fleet enhancement program. We will take delivery within the next 2 weeks of ship number 12 of the modified 747 fleet. We will finish up that modification in 1989—all of those, quantum leaps in our capability.

The fiscal year 1988 funded level is for 45.4 million ton miles a day, toward the 66 million ton mile goal. As you noted in your opening comments, sir, the C-17 is the final step in reaching the 66 million ton mile plateau. I call it a plateau because it is only a step to our final goal, which is, quite frankly, higher than that.

I trust that the Senate will support the C-17, as has the House, as we reach these goals, and we must prevent any delays in IOC because it is critical to the other two elements of the lift equation, the sealift and the prepositioning equipment.

Also, we must get more mileage, I believe, out of the Civil Reserve Air Fleet if we are to ever go beyond the 66 million ton mile capability that we have set for ourselves as a goal. We must go to the civil sector because buying it organically I would not believe is prudent.

Let me at this moment just address a very quick and unique airlift requirement, and that is in our Southern Command. CINCSOUTH, General Woerner, has been to the Congress on several occasions to specifically plead for a very tailored need.

Unlike those of the other theaters, he needs a brown water navy and a STOL, a short takeoff and landing capability, intra-theater airlift, and transport aircraft. General Woerner has repeatedly expressed his need for the C–27 to fill his airlift requirements.

I certainly support that. It is supported by the Military Airlift Command. We hope that we can get some support for that within the Congress and OSD.

When we look at our port reception, our throughput capability, in our country and in other countries, it is currently assessed as being adequate, although not without some problems.

Lack of a west coast containerized ammunition off-load facility is our most pressing port problem at the moment. It is an old problem. It certainly is not new, but it now becomes more complicated as the population growth on the west coast continues to encroach upon the ports that we have available.

Handling massive sizes of ammunition through large population areas is not prudent and should not be done. We will need to build ourselves an isolated facility to deal with this.

The INF Treaty ratification will have implications for ports and global transportation as well. I certainly strongly support the ratification because it removes the single largest threat to our overseas ports of reception that we will have.

The treaty, I offer, would also create a conventional force-dependent atmosphere that we in the transportation business must be very aware and cognizant of, and something that we shall have to deal with. We could be asked to move more and more of it faster—transportation is more important than ever before in an INF world that we would be in.

I need not tell this committee the importance of a unified transportation effort to both deterrence and fulfillment of our responsibilities as they change in this world of ours.

I feel rather uniquely qualified, if I could talk a few minutes, Senator, on people issues. As a commander in chief, I have under my responsibility men and women of the several services. As a major air commander of the U.S. Air Force, it still gives me the ability to stay in touch directly with the people who serve their nation. And then as a former Deputy Chief of Staff for Personnel of the Air Force, I have some insights that I would like to pass on to you.

My concern as a commander in chief is that I could run out of people before I run out of equipment. Uncertainty has been induced into the lives of our people; our service members are not sure of the ground they stand on. Their spouses are even less sure. It is creating uncertainty in their lives and causing them to leave us, and that concerns me.

For instance, if I could use the classic, maybe even gross, example, the MAC pilot retention at this time is just terrible. The 6 to 11 year group of pilot's retention rate has declined from 79 percent cumulative continuation rate (CCR) in fiscal year 1983 to 39 percent in 1987.

It is even worse when you look at our strategic airlift pilots, sir. They are the ones that fly the C–5s and C–141s. Their retention rate in 1983 was 73 percent. They have fallen almost a full 50 percentage points to 24 percent today. That is in the past quarter of 1988.

Low pilot retention has several effects. One certainly is the lack of people in readiness. The other one, it is terribly expensive to replace these sorts of people.

A problem is surfacing in the availability of merchant mariners in our country, and that must be dealt with as well. That problem, no matter whose chart you see, is going in the wrong direction.

I do not want to mislead you by anything I may say now and leave you with the notion that pay will solve the problem. It will not solve the problem of people serving their country. Our people do not serve their country for pay. But it is certainly an element. It is a major part of the problem, and it became an integral part when we moved to an All-Volunteer Force several years ago and made a commitment to pay that All-Volunteer Force a considerable wage.

Military pay now lags about 11 percent behind the civil sector. The 2 percent pay raise, welcomed last year, did not meet the 4.2 percent increase in the cost of living. In fact, it became a negative pay raise for many of our people when you included the social security tax increase, a variable housing allowance decrease of about 60 percent for Air Force members alone. Eleven percent subsequently experienced an actual decrease in take-home pay, even though the Congress did consider and give them a raise in pay last year.

Let me give you a specific example if I may. Several days ago, I was in Altus, OK, and was talking to a young staff sergeant there. The staff sergeant's take-home pay is $1,129 a month. That is not exorbitant by anybody's measure. As a matter of fact, it is sometimes very difficult to live on that. When you total up his increases and his decreases, he had a net decrease of $10.59 less take-home pay this past year than he had the year before.

It is very difficult for me to explain to a young staff sergeant with a wife and two children how we can permit that to happen, we the strongest and most wealthy Nation on Earth.

That sergeant, like the sailor at sea and the soldier in Europe, has no other advocate, I believe, than people like you and me, members of committees like this, those of us in the uniform, who must be their advocates, their constituency, because no other advocate or constituency exists anywhere. He believes that you and I will take care of him. He trusts us.

We must live up to that trust, I believe. We violate that trust and plant the seeds of doubt and discontent when we force him to take a pay cut, as I explained, when we force him to pay more money for the morale and welfare and recreation activities, and offer less than we did in years gone by.

We force him to have doubts when he must pay civilian doctors because of direct health care cutbacks and the raise in CHAMPUS costs. And when we force him to foot the bill for two out of every three moving dollars expenses from his own pocket, he wonders what we are doing.

The new recruit, I might offer, fares even worse. He comes on board with all of these same problems as the staff sergeant I mentioned, plus a 27 percent reduction in his retirement benefits which has occurred over the last 5 years to the new people coming on board.

Someone has to let these people know that we appreciate their sacrifices, their patriotism, and their willingness to serve their country. If we do not do that, we will not have the string of very, very good and competent people that we are blessed with today.

I believe, frankly, it is up to you and me, sir. There is just simply no one else to do it. We cannot afford to go backwards, and that is why I am dead serious about supporting the President's proposed 4.3 percent pay raise and 3.4 percent VHA increase in the fiscal year 1989 revised budget which the Senate is considering now.

You know, we just cannot beat the Soviets' numerical advantage. What we have to do that with is people. The Soviets have shown us over the years that they can reverse engineer anything that we build, and they do that quite regularly. We watch them do that.

But they sure as heck cannot reverse engineer the American fighting man. They do not even understand what makes him tick and why he does what he does. Our people are simply our strength, in transportation and everything else.

Secretary Carlucci asked you the Congress: "Please join me in telling our uniformed men and women that their standard of living will not be the first victim of resource constraints." I am here today to ask the same.

One short comment on command, control, and communications. There is much to be said about command and control, and we could leave that for another day. It is very technical and complicated. My summary of that is that an ounce of transportation lost is an ounce of transportaion never regained, and therefore I believe it my responsibility to make sure that we do not waste anything that we have, because what we have is simply not enough.

Now, let me mention something about strategic sealift. You can see by my uniform, Mr. Chairman and members of the panel, that I am probably not the country's leading expert on sealift. But I must tell you, since I have taken the reins of the Transportation Command I have had an education that is overwhelming to me and amazing to some of my fellow pilots in the Air Force, and I find it a fascinating business to be part of.

Since assuming command, I have traveled extensively and met with the sealift experts at all levels—the seamen, the ships' captains, the shipbuilders, and the shipowners. I have read the industry reports and studies, including the latest in a long line of studies, the Commission on the Merchant Marine and Defense.

No two studies are alike, I would offer—you know that—in their assumptions. Therefore the results vary and are best represented as a range of short tons of unit equipment, our most critical surge capability. And I specifically mention the unit equipment because that indeed, in our jargon, does equate itself to that which must be moved quickly, that which must be available to commanders like General Otis to fight with first. The unit equipment is what we must move first.

The requirements are from 850,000 short tons of U/E single theater to 1 million short tons of U/E three-theater global war. The capabilities we have are about 800,000 short tons of U/E equipment movement.

The shortfalls currently range from a marginally inadequate to somewhere around 100,000 short tons U/E, and the forecast shortage will be from about 100,000 tons, short tons, of U/E—that is in a single theater—to somewhere around 800,000 short ton shortfall in a global war.

So what I am trying to do there is put some bounds on what it is and tell you that it is an imprecise figure. But whatever figure you look at, the shortage is not good and it is getting worse. The trends simply do not look promising.

The commercial flag fleet has declined. The merchant marine work force has declined. The lack of merchant mariners after mobilization will get worse.

About one-third of our total capacity in shipyards has been lost since 1982, with the closing of 76 U.S. shipyards and 38 major drydock facilities. More closings are likely. This affects our ability to reactivate reserve ships and repair those that are battle-damaged.

The bottom line, sir, is not to hang our hats on any one source, but draw I think broad assessments and focus on the trends, and those assessments are poor and the trends are awful.

Regardless of the assumptions and recommendations, all studies seem to agree that a strategic sealift shortfall, if it is not already at hand, is certainly right around the corner. And before we can get it turned around, I am afraid it will be very bad to deal with.

The existing pool of information causes enough uncertainty that I doubt our ability to meet even today's sealift requirements. I cannot validate for this committee that we currently possess sufficient sealift to do the job given to us today.

The picture is bleak. But frankly, sir, I do not think it is time to administer the last rites yet. I think we have got some work to do. We have got some things going on that hold promise. And I think us working together, and specifically a hearing like this—and I would, if I may, be so bold as to compliment the committee on putting together the sorts of people you have. I am proud to be here with Mr. John Gaughan from the Maritime Administration and the DCNO for Logistics of the U.S. Navy to discuss these particular issues. I doubt that there has been such a meeting before in the city of Washington.

There are some initiatives under way that I think will help. Certainly, what has been done with the Ready Reserve Force—is extremely good. Currently we have 95 ships in the inventory, with a programmed level of 108 ships by the end of 1988, and our overall objective is 136 ships by 1994.

Two weeks ago, I was in Korea, part of the Team Spirit exercise which occurs each year. I was in P'ohang Harbor standing on one of the Ready Reserve Force ships, the Cape Ducato. It is the number two ship in that inventory and it is in good shape.

I talked at great length to the crew. They had no trouble breaking that ship out or doing its job. But it is the number two ship.

There are 55 ships in that 5-day category, and I have talked to Mr. Gaughan and we wonder what that ship number 55 is like. The

point is, I think we need to be cautious in assuming that the entire fleet is ready and able to sail today.

Sealift enhancements in the form of seasheds and flatracks will give us the capability to modify 25 container ships to carry unit equipment that I mentioned earlier. We should have at least 50 of those, but the 25 will certainly help.

Conversion of old hulls into auxiliary craneships provides essential nonfixed port operations. Six ships are delivered today, two ships to be delivered in March, 1989 and two ships awaiting conversion this year that will pay big dividends as well.

These are positive initiatives that deserve continued support as we attempt to find the most effective and efficient mix of commercial and Government-owned maritime sealift.

On the horizon, the surface effect fast sealift ship (SFS) is a concept that may well have a very viable role between airlift and conventional fast sealift. We should continue to explore its role in this equation. We should continue to be bold about such initiatives as the fast sealift ships.

There is no single cure-all. Perhaps we should break the problem down into smaller manageable pieces and attack those, much as we did the airlift problem when we established the interim 66 million ton-mile goal.

It is kind of like my analogy, if you would, of eating an elephant piece by piece, and that is the way we ought to go about it. Setting modest goals for increases in, say, proportion of the world trade in fast sealift trade, or bringing new technology such as the SFS or enhanced FSS on board could help us move forward in improving strategic airlift and keep those lines on the chart to my right going in the correct direction, rather than in the wrong direction.

Regardless of how we do it, the understanding of the problems and support of the solutions by this committee is what is necessary. And I am very proud and honored to be here today to present this statement to you and answer whatever questions you may have when the other two statements are completed.

Thank you very much.

[The prepared statement of General Cassidy follows:]

STATEMENT OF

GENERAL DUANE H. CASSIDY

COMMANDER IN CHIEF

UNITED STATES TRANSPORTATION COMMAND

SUBJECT:

CAPABILITIES, PRIORITIES AND SHORTFALLS OF THE

UNITED STATES TRANSPORTATION COMMAND

Mr Chairman and members of the committee, thank you for the opportunity to discuss this country's global transportation concerns as I work with my fellow CINCs in an effort to defend our national interests. In our national defense strategy of forward deployment, the new United States Transportation Command (USTRANSCOM) will play a pivotal role by coordinating and providing the transportation to rapidly reinforce the theater CINCs and by supporting these troops wherever and for however long it requires.

After review of the many studies concerning transportation capability, one can come to no other conclusion than we simply do not have enough airlift and sealift nor are we closing the gap. Although, we have made progress in increasing airlift capacity we still face shortfalls. Strategic sealift capacity is encountering a steep, rapid decline which we must immediately seek to check. We face other major concerns besides adequate numbers and types of aircraft and ships; people and quality of life programs and a command and control system to tie the lift platforms and people together are crucial to this command's ability to do the job in war. We must address these concerns within the context of USTRANSCOM's capabilities, priorities, and unique relationship with the civil sector.

Let me point out that a significant portion of our capability rests in the civil sector. DOD will never possess enough organic lift to support the theater CINCs. We should not. We rely upon the civilian transportation industry to join with us to project national power overseas. The health of the commercial transportation carriers is as important to our warfighting capability as is the readiness of our combat forces. They go hand in hand.

Nowhere is this more evident and critical than in the rapidly deteriorating United States maritime industry. Today we cannot meet the national commitment of 10 divisions to Europe in 10 days for many reasons including the lack of immediately available shipping. Dollars alone will not cure the extensive problems that this industry faces. The Departments of Defense and Transportation, in conjunction with the civil sector, including both unions and shipowners if necessary, must spearhead a national effort to revitalize our commercial maritime industry. To be successful, such a national effort requires the full support and endorsement of you, the Congress. Together, we must foster a revitalization of all facets of the United States merchant marine fleet - shipbuilding, ship operation, and personnel. This initiative, when combined with airlift, ports, and other initiatives I will address, would permit the United States Transportation Command to perform its mission.

AIRLIFT

A strategy of forward deployment places a premium on our Nation's transportation capability. We have made substantial progress in improving the airlift arm of that capability. The additional cargo capacity and in-flight

refueling capability of the stretch C-141B, the addition of the C-5B, the dual in-flight refueling and cargo carrying ability of the KC-10, and aircraft enhancements under the CRAF program have placed airlift at the threshold of achieving our fiscally constrained 66 MTM/D goal identified in the Congressionally Mandated Mobility Study (CMMS). The C-17 transport is the final step towards eliminating the existing airlift shortfall between our funded FY88 45.42 MTM/D level and the 66 MTM/D strategic airlift goal. Consequently, we must avoid any further delays in the C-17's Initial Operational Capability (IOC). General Galvin, USCINCEUR, said it succinctly in recent testimony, "To reduce the current intra and intertheater airlift shortfall, the C-17 transport aircraft should remain a high priority item."

I trust members of the Senate similarly recognize the importance of the C-17 and will echo the sentiments of the House Armed Services Committee (HASC) who permitted the C-17 portion of the FY89 Revised Budget Submission to pass through the HASC with only a minor reduction in procurement funding and no reductions in RDT&E.

Achieving the 66MTM/D strategic airlift goal is not the final answer to our Nation's airlift needs. It is but an interim objective dictated by fiscal realities. Actual airlift requirements are substantially higher and we must keep moving ahead once the 66MTM/D plateau is reached. Support for Civil Reserve Air Fleet (CRAF) improvements will continue the forward momentum we need to eventually meet our total airlift requirements. CRAF is the only way and probably should be the only way we can ever hope to go beyond the 66 MTM/D goal. Legislation to expand Public Law 97-86, CRAF Enhancement, will broaden opportunities for CRAF

enhancements and give form and substance to the National Defense Features Program for CRAF. Additional initiatives, under the umbrella of Partners in Lift for the US (CRAF PLUS) will promote future wartime CRAF capability. The fiscal realities of national defense spending mean we must get more defense mileage out the nation's commercial aircraft fleets.

PORTS

Port reception and throughput, both inter and intratheater, are currently deemed adequate for supporting individual scenarios. The Military Traffic Management Command (MTMC), a USTRANSCOM component command, expects to soon complete an analysis of requirements versus capabilities assuming a scenario where initial hostilities begin in Southwest Asia and spreads to the other theaters. This study should permit us to more accurately identify and correct potential shortfalls or chokepoints. Notwithstanding, we have some very real concerns to resolve.

An old but now more complicated problem is the need for a containerized ammunition outload facility on our West Coast to support Pacific operations. The problem identified in numerous exercises has been with us for sometime but has gradually worsened as the metropolitan areas surrounding our existing ports continue to expand. In some instances it could be labeled a warstopper. Now, with the growth of the civilian population around West Coast ports, and with DOT continuing to say that commercial ports should not be planned for ammunition shipments in shipload lots, an isolated West Coast port capable of handling containerized cargo is the answer. It is a vital DOD requirement that will require major

military construction dollars. I need your help to make that happen.

Naturally, as a CINC, I find myself pondering the implications of the pending INF Treaty ratification and its impact on global transportation. Let me share my thoughts with you now and I choose to do so at this point because of the immediate impact the INF Treaty would have on our overseas ports and the potential for transportation to assume an even more important role in reinforcement and resupply. First, I strongly support ratification of the INF agreements. As to impact, it would remove Soviet missiles whose targets most probably include our overseas ports. Our port security would continue to be of concern but one large threat would be eliminated. Eliminating this threat is a significant advantage because of the conventional force dependent atmosphere the treaty will create. We could be called on to move more and move it faster than ever before should war breakout in Europe. Rapid, effective transportation capability and adequate, available ports would most likely form the cornerstones of any successful conventional response. Also, we must not ignore the deterrent value we derive from a transportation network that can quickly project and sustain forces.

PEOPLE

I feel uniquely qualified to speak to you on people issues as a Commander-in-Chief; as a Major Air Force Commander; as the former Deputy Chief of Staff for Personnel of the Air Force. I have read the testimony of my peers. I have testified. But our programs are not working.

We could run out of people before running out of equipment. There has been much uncertainty induced into the lives of our personnel. The service member is not sure of the ground he stands on. Their spouses are less sure. For example, MAC's pilot retention rates measured by the 6-11 year cumulative continuation rate, have declined from 79 percent in FY83 to 39 percent in FY87. So far, FY88 rates appear to be heading even lower. This pilot retention decline, coupled with the current merchant mariner shortfall severely impacts USTRANSCOM's wartime capability.

Our military pay now lags 11 percent behind the civilian sector. Even if you choose to discount the credibility of this figure, you cannot dispute the fact that this year's 2 percent pay raise hardly met the 4.2 percent increase in the cost of living and was further diluted by an increase in Social Security tax. In the Air Force alone, approximately 60% of the members experienced a reduction in their variable housing allowances (VHA), while 11% experienced an actual decrease in take-home pay. Under these circumstances, I cannot stress strongly enough the importance of your support for the President's proposed 4.3 percent pay raise and 3.4 percent increase in VHA in the DOD FY89 budget submission.

Here is but one example of what's happening in the field. A staff sergeant stationed at Altus AFB in Oklahoma is forced to live off base due to insufficient military housing. His VHA decreased from $54.58 to $17.74. His Social Security tax increased by $5.66. Together, net pay decreased a total of $10.59 after the 2% pay raise. This amounts to a nearly 1% decrease in this sergeant's take home pay.

He, like the sailor at sea and the soldier in Europe, has no other advocate than those of us in uniform and you the members of this committee. He looks to you and me as the leaders of his constituency - his advocates for an adequate standard of living. He believes we will take care of him; he trusts us. We violate that trust and build doubt in his mind when we intentionally or unintentionally take hard earned pay out of his pockets. We promote the uncertainty when lack of Congressional legislation and support forces him to reach deeper into his pockets to participate in morale, welfare, and recreation programs already cutback in number and benefits; to pay the civilian doctors because military direct health care programs are shrinking and CHAMPUS costs are on the rise; to dig himself out of the financial hole caused by a permanent change of station move where he foots the bill for 2 out of every 3 moving expense dollars. The doubt we create in the mind of that staff sergeant is not lost on the new recruit, who is already at the bottom of the pay scale, and faces not only the problems of the sergeant, but sees his retirement reduced by 27% as soon as he steps on board. Congress must remove the uncertainty and restore the trust. Someone has to let these people know that we appreciate the sacrifices they make for their country and that they will be adequately taken care of in return. I believe that is up to you and I. There is no one else to do it.

We cannot nor should we attempt to match the Soviets tank for tank or aircraft for aircraft. We blunt their strength in numbers with highly trained, dedicated personnel operating complex, sophisticated equipment. This is our force multiplier, and we must maintain that edge. The Soviets can reverse engineer everything we put on the battlefield except the American fighting man. The Soviets cannot understand why

he does so much for so little - this is our strength. Although faced with some very tough budget decisions, Secretary Carlucci's support for our military families was unequivocable when he asked Congress "to join me in telling our uniformed men and women that their standard of living will not be the first victim of resource constraints."

As we speak of people, the picture becomes even cloudier at USTRANSCOM. Unlike the other unified and specified commands, we have that unique relationship with the civilian sector. We depend heavily on their capability. When comparing military and civilian transportation and skills, many are similar. This unique situation constitutes a ready avenue for crossover of trained personnel from the military to the civilian sector if we the military, the DOD, and Congress display any lack of resolve to meet the needs of the force. I ask you to demonstrate the necessary resolve to maintain a viable and effective military force.

COMMAND, CONTROL, COMMUNICATION, AND COMPUTER SYSTEMS (C4S)

Command, Control, Communication, and Computer Systems (C4S) represents the integrator that ties transportation assets, people, and the mission together. USTRANSCOM's mission is inherently C4S intensive. For example, MTMC primarily manages military traffic; it does not possess the organic forces to transport cargo. As a result, MTMC relies heavily on C4S to get the job done.

Our most pressing C4S concern is the lack of a communications and computer network for global mobility planning and execution. Fielding programs such as the Worldwide Military Command and Control System (WWMCCS)

Information System (WIS) and the Joint Operational Planning and Execution System (JOPES) will provide a state-of-the art decision-making capability in response to crisis or contingency. Our long-term objectives to efficient mobilization are dependent on WIS and JOPES which represent the most critical communications and computer program in USTRANSCOM's wartime mobility planning. We cannot meet our chartered wartime mission without this capability. This program is what USTRANSCOM is all about. Realistically, we will never have enough lift. We must put what lift we do possess to the best possible use. This program is the means to that end. As a major advocate of WIS and JOPES, I ask you to give us the capability we need to do our job by holding the line on any further cuts and subsequent delays in WIS and JOPES implementation.

Several other programs are also key in the command's efforts to form a single communications and computer Global Transportation Network (GTN). For example, MAC'S Global Decision Support System (GDSS), MTMC's Strategic Deployment System (SDS), and MSC's Strategic Sealift Analysis System (SEASTRAT) represent additional initiatives which, when integrated, will form a joint, global communications and computer network that is user-oriented and accessible, providing a common database. MTMC's Transportation Coordinator Automated Command and Control Information System (TC-ACCIS), another major mobility initiative and candidate for integration, will provide accurate real-time force deployment data from unit to installation to the National Command Authorities level. Far too often, these types of programs are not understood, are overlooked or are simply buried. I urge you to understand the criticality of the GTN, maintain its visibility, and support the required funding so

that USTRANSCOM will be responsive to the challenges which lay ahead.

STRATEGIC SEALIFT AND NATIONAL SECURITY

Perhaps the most and disturbing situation I have encountered since assuming command of USTRANSCOM is the deterioration of the US maritime industry and the implications for our national security. As you can see by my uniform, this is an area in which I have little experience but I am gaining knowledge everyday. Since assuming command, I have traveled extensively and met sealift experts at all levels: the seamen, the ship captains, the shipbuilders, and the shipowners. I have read the industry reports and studies including the most recent report, The Report to the President by the Commission on Merchant Marine and Defense, which states, "The current inventory of ships suitable for strategic sealift is inadequate to meet the requirements of even a single theater conflict. With the dramatic net decrease in the number of ships, merchant seamen, and shipyard facilities and workers during the next 13 years, it will be impossible for the United States to meet the requirements of the national strategy in the year 2000 from its own resources."

Numerous studies conducted in the eighties form the basis for our understanding of the troubled state of the maritime industry. In April 1981, the Congressionally Mandated Mobility Study (CMMS) called for more fast sealift, stating that a mechanized Army division requires more than 100,000 tons of cargo for deployment and over 1,000 tons per day of resupply. It concluded an "airlift only" solution was unaffordable and a combination of airlift and fast sealift ships was a viable alternative.

The 1984 DOD Sealift Study concluded that in a full Southwest Asia deployment, dry cargo lift requirements were 800,000 short-tons of unit equipment for surge and 1.7 million short-tons for resupply. The US maritime fleet was thus judged marginally inadequate based on a projected decline of 15 percent (1.9 million to 1.6 million deadweight tons) in available shipping. A more recent Maritime Administration projection, quoted in a July 1985 special report to the President and Congress on shipping, shipyards, and sealift, tagged the shipping decline at 52 percent (1.9 million to .9 million deadweight tons). If this projection proves to be a reality, a strategic sealift shortfall of .7 million deadweight tons will exist by 1992. Similar projections for maritime tankers show a decrease from 14.6 million deadweight tons in 1987 to 6.5 million deadweight tons in the year 2000.

The CMMS represented the initial attempt to quantify airlift and sealift requirements and capabilities and was superceded by the DOD Strategic Sealift Study. It too has now been replaced with the latest evolution in strategic sealift studies - the 1987 Commission on Merchant Marine and Defense. This study will shortly be followed by the August release of the Revised Intertheater Mobility Study (RIMS). In any event, the Commission on Merchant Marine and Defense report supports earlier studies that the entire US maritime industry is in a state of rapid decline. The United States flag commercial fleet declined from 843 ships in 1970 to only 369 active ships at the beginning of 1987. The report projects that with current trends, the number of active ships will decrease to 220 by the year 2000. The Maritime Administration report quoted earlier corroborates this downward trend.

US shipyards have not begun construction on a new US flag ship since 1985; and as of November 1987, no merchant ships were under construction in US shipyards. As older ships are retired, no new US-built ships are available to take their place. Additionally, our current fleet of ships are, in general, less militarily useful due to their large size, their nonself-sustaining configuration, and the limited number of ports capable of handling them. Current shipping trends favor containerization, which is incompatible with a majority of the unit military equipment shipped during deployments.

Requirements versus capabilities vary from study to study depending on the assumed scenario, notional ship capacity selected as "standard," attrition factors, and availability of allied shipping. However, one requirement baseline, similar to airlift's 66 MTM/D goal, is the proposed sealift goal of about 1 million short-ton, single-trip, surge capability for unit equipment. Translating tonnage into a required number of ships is difficult at best. Ships vary as to size, military usefulness, design, availability, and cargo handling capability. Study estimates in total additional shipping required range from maintaining our current marginally insufficient fleet of approximately 369 active total cargo vessels ("best case", 1987, one theater scenario) to an increase in the fleet to 650 ships (three theater, global-war scenario).

Projected out to the year 2000, the additional shipping required significantly increases due to an assumed increase in surge and sustainment requirements. At this point, defining the exact number of ships sufficient to do the job is not as critical as recognizing the continuing downward trend in ships available -- a decline from a present level of 170 privately owned US flag commercial dry cargo ships to a

projected level of 64 by the year 2000. Even those who maintain we have no strategic sealift shortfall today must concede such a shortfall will exist tomorrow unless we act now. Everything we can get our hands on points to the fact we are headed in the wrong direction in ships, shipyards, and seamen. For example, the results in the table to follow were developed from data contained in the Report of the Commission on Merchant Marine and Defense.

US Sealift Requirements and Capabilities
One Theater - Southwest Asia (No Allied Support)

	Ships Req / Avail	Short-Tons Req / Avail (Millions)	Shortfall Ships / Short-Tons (Millions)
1987			
Unit Equip	250 / 208	slightly less .8 / than .8	42 * / Negligible
Container	50 / 88	1.7 / 3.5	None /

* The 208 ships available are marginally insufficient and assume no attrition and full availability. The Commission recommends the additional ships to compensate for attrition and nonavailability.

2000			
Unit Equip	250 / 150	slightly more .8 / than .7	100* /.1
Container	100 / 54	1.7 / 1.2	46 /.5

* Approximately 32 ships needed to cover the .1 million short-ton shortfall. The remainder would compensate for attrition and nonavailability.

Three Theater - Global War (Allied Commitment Honored)

1987			
Unit Equip	280 / 208	2.3 / 2.2*	72 /.1***
Container	80 / 88	5.7 / 12.6**	None /

* .8 million short-tons US and 1.4 million short-tons Allied.
** 3.5 million short-tons US and 9.1 million short-tons Allied.
*** Approximately 32 ships needed to cover the .1 million short-ton shortfall. The remainder would compensate for attrition and nonavailability.

2000			
Unit Equip	350 / 150	2.7 / 1.9*	200 /.8***
Container	90 / 54	7.9 / 16.0**	None /

* .7 million short tons US and 1.2 million short-tons Allied.
** 1.2 million short-tons US and 14.8 million short-tons Allied.
*** Does not appear to compensate for attrition, etc.

The impact of the declining US maritime industry on mobilization is succinctly stated by Admiral Crowe in his FY88 Military Posture Statement: "In any major overseas deployment, sealift will deliver about 95% of all dry cargo and 99% of all petroleum products." Compare these requirements to the current and projected maritime capability presented in the previous table and you can readily see the unit equipment and sustainment sealift shortfalls that will exist in a single Southwest Asia scenario now and in the future. Also evident are the surge shortfalls in all theaters during a global war scenario. Although not specifically addressed within the table, the tanker fleet numbers are also declining, but not as dramatically as in the cargo fleet. By the year 2000, however, a tanker shortfall of .75 million deadweight tons in a global scenario is projected.

The maritime problem is much deeper and more widespread than simply the number of ships available. Associated with the decline in merchant marine shipping are declines in the merchant mariner pool and ship construction and in the repair mobilization base. Without new construction or repair, this mobilization base is eroding quickly. Since 1970, the merchant marine workforce has declined nearly 60 percent to a current level of 28,000 and is projected to decrease to a level of 12,000 by the year 2000. Should we have to mobilize, our initial projected merchant mariner shortfall would be 6,170 seamen. The shortfall would escalate to 8,126 seamen during sustained operations and peak at approximately 20,000 seamen when considering economic shipping and the shipping of critical materials. As you can see, the maritime industry's ability to crew reserve ships and partially replace foreign crews on US flag of convenience ships is in jeopardy.

Dramatic declines in shipyard repair facilities, shipyard equipment suppliers, and trained repair personnel compound the problem. Since 1982, at least 76 US shipyards or ship repair facilities have closed and 38 major drydocking facilities have shut down, causing over 52,500 production workers to lose their jobs - approximately 1/3 of the nation's total shipbuilding capacity. Consequently, our ability to rapidly reactivate reserve ships and repair battle damage is worrisome and will become increasingly so unless we reverse this trend -- and quickly.

Up to this point, I have addressed the maritime industry problems primarily in terms of full mobilization. However, I envision low intensity conflict or nonmobilization contingencies as the most probable form of conflict we will encounter in the foreseeable future. Even in this type of scenario, our sealift capability is a limiting factor. An average snapshot of dry cargo shipping available to DOD for response to a nonmobilization contingency equates to approximately 160 ships or about 19% of our approximate 850 dry cargo ship, full-mobilization, NATO scenario capability. Consequently, USTRANSCOM's, and hence our Nation's, ability to respond to nonmobilization contingencies is not without significant limitations. The importance of commercial sealift in a contingency is readily supported by the British use of strategic sealift during the Falklands War. In 2 1/2 months, 50 commercial vessels were taken from normal trade, chartered, converted, loaded, and set sail to the Falklands. Twenty-seven of those ships sailed in the first month. In total, three-fourths of all British vessels that sailed into the Falklands were merchant ships with civilian crews.

From this discussion, one can readily see that most of our sealift capability, across the full spectrum of

conventional conflict, lies within the declining US maritime industry. Solutions to the entire set of maritime problems are not as easily identified nor agreed upon. Recommendations range from increased sealift enhancements and more government-owned shipping (July 1985 Report to the President by the National Advisory Committee on Atmosphere and Oceans) to the recently published recommendations of the Commission on Merchant Marine and Defense calling for government-built charters, operational subsidies, cargo preference improvements, and more favorable tariff rates. Arguments abound on both sides concerning the extent the Federal Government should become involved in revitalizing the maritime industry versus procuring more government-owned assets. Regardless of the numerous assumptions and recommendations, all studies seem to agree a strategic sealift shortfall, if not already at hand, is surely pending. In my personal opinion, the existing pool of information concerning strategic sealift causes enough uncertainty that I doubt our ability to meet even today's sealift requirements; I cannot unequivocally state nor could I validate that we currently possess sufficient sealift to do the job.

The current and projected state of our sealift capability paints a bleak picture. However, we should not yet administer last rites to the fleet. With the support of the Congress, DOT, and DOD, some inroads to reverse the problems are under way or being explored. One positive note is the projected increase in the Ready Reserve Force (RRF) from a current level of 95 ships to a programmed level of 108 ships by the end of FY88, and a projected level of 136 ships by 1994. On my recent trip to the Pacific theater I personally visited the "number 2" ship in our RRF fleet. The

ship's captain reported no problems in mobilizing the ship for the exercise and I was impressed with the crew's expertise, readiness, and maintenance of the ship. One temporary problem did surface. Due to contract changeover, newly hired crews will have to learn the peculiarities of the different RRF ships, many of which are foreign built. Until this period of acclimation is complete, we could experience temporary problems in the future should the RRF need to be mobilized. Although my impression of the ship and crew was favorable, I must point out that this ship is frequently exercised and therefore one of the best of the lot. I cannot express the same level of confidence with any certainty that ship number 95 and her crew are equally as good or ready to mobilize.

Continued acquisition of sealift enhancements, such as seasheds and flatracks to increase the military cargo compatibility of existing commercial shipping, are funded through 1992 and will provide a capability to modify 25 container ships to carry unit equipment. Conversion of old hulls into auxiliary crane ships capable of nonfixed-port operations is a big plus. We already have six of these ships delivered and will add an additional two between now and March 1989. In fact, the latest delivery was the Cornhusker State (TACS-6) this past Saturday. The final two ships in the program are funded for conversion this year.

Should it prove realistic, the concept of the new Surface Effect Fast Sealift Ship (SFS) coupled with the SL-7 Fast Sealift Ship roll-on, roll-off program, may substantially enhance reinforcement of Europe. General Galvin made particular mention of these programs and their potentially favorable impact to his theater in testimony on 2 February. The implications to the NATO

theater are that the US efforts to finally honor its agreement (10 divisions in 10 days) may be considerably enhanced. Providing the lift to fulfill our portion of the agreement quickly is particularly essential since Germany is in the final stages of fulfilling their obligation to support us by activating 93,000 reservists; currently, we are incapable of honoring that commitment.

These are excellent initiatives which need continued support. One can see in them solutions in the broadest context of a national commitment and resolve to revitalize the entire US maritime industry and strengthen our defense posture. Additionally, since readiness and national defense are directly impacted, Congress and DOD, in concert with DOT, should continue to study, explore, and evaluate the current and projected maritime shortfalls to determine the most effective and efficient mix of commercial and government-owned maritime solutions.

The answers to the strategic sealift problems are as complex as the problems themselves. When faced with a complex problem dissecting it into smaller, more manageable problems is the best method of attack. Perhaps in this instance, the nation's interests would be better served if we establish modest goals for improving strategic sealift. For example, increasing our commercial fleets' percentage of world trade from 4% to 8%, increasing the number of SL-7 fast sealift ships from 8 to 12, and bringing the SFS or an enhanced SL-7 on board. This problem-solving approach established the airlift goal of 66 MTM/D and we have subsequently been successful in reducing our airlift shortfalls as we seek to attain our goal. We may be able to achieve similar positive results in reducing strategic sealift shortfalls. In any event, regardless of how we do

it, we must stem the decline in the US maritime industry and enhance our strategic sealift capability. Any efforts to do so must begin with the support of this committee and the Congress.

CONCLUSION

The United States Transportation Command has come far in a very short period of time. Many obstacles remain, with some more easily overcome than others, but none that we perceive to be insurmountable. We are confident about the future of this command, however, we must exercise care and move in concert with the other CINCs, and in our case with other departments and agencies of this nation, to build a joint military national defense team .

I envision USTRANSCOM as an excellent vehicle for streamlining and promoting efficiency in mobility planning, deployment, and execution, however, there is danger in taking transportation for granted. It is not something that just naturally occurs; nor will it always be there when you need it. Adequate global transportation capability requires conscious, supportive funding decisions the same as any other combat system. You can also be assured there are inherent benefits to be had in those funding decisions, because when it comes to defense spending, only global transportation provides a greater dollar value for the money spent. The returns are not only measured in cargo moved, but in increases to mobility readiness.

In summary, I am pleased to have had the opportunity to address you concerning the United States Transportation Command, and I solicit your understanding and support for the priorities and concerns presented. We in the US Transportation Command look forward to presenting programs and solutions to you, the members of our Congress, so that we together may start down a road to a very real national transportation system in support of defense.

Senator KENNEDY. Thank you very much, General. I think it was a very candid and fair assessment. We will look forward to questioning you about some of the points that you raised. We will hear next from Admiral Arthur and Mr. Gaughan, and then we will take your questions.

Admiral.

STATEMENT OF VICE ADM. STANLEY R. ARTHUR, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS FOR LOGISTICS

Admiral ARTHUR. Thank you, Mr. Chairman and members of the committee. It is a pleasure to be here this afternoon and participate in this hearing.

As my colleagues, General Cassidy and the statement from General Otis have mentioned, the ability to transport men, equipment and supplies to battlefields or areas of confrontation distant to the United States is key to our national defense strategy. When we deploy any force of consequence, strategic sealift will be responsible for delivering 95 percent of the dry cargo and 99 percent of the petroleum products involved. The success of this strategic sealift mission is inexorably linked to the capacity and capability of the U.S. merchant marine to respond with the necessary men and ships. Unfortunately, not only has our merchant marine continued to decline in numbers of ships, but we have faced a pronounced industry shift toward less militarily useful ships. These changes stress our ability to execute a military strategy that assumes and requires the ability to transport large quantities of diverse material on short notice.

For ease of reference, we divide our lift requirements into two basic categories, the first being, as the General mentioned, the surge unit equipment, the wheeled and tracked vehicles and helicopters, the basic warfighting machinery, required early on in a confrontation to flesh out our in-place forces and to marry up with the troops being flown in.

The second category is sustainment, the beans, bombs, bullets and spare parts needed to resupply and support our forces once they are in the field. This latter category lends itself well to being shipped in the large container ships that are becoming predominant in our merchant marine.

The most severe challenge in the deployment scenario is the shipment of surge unit equipment, equipments that for the most part are heavyweight and outsized and cannot be containerized or airlifted in the quantities required with the current or projected airlift asset levels. Unit equipment shipment times have become critical with the adoption of strategies dependent on rapid and major reinforcement for success. Navy programs have improved our ability to ship unit equipment, but they have not kept pace with the decline of the militarily useful merchant ships, nor were they intended to provide us an inventory of ships that of themselves are able to meet the requirements of a rapid deployment strategy.

This, then, is our problem: how do we get the needed equipment to our warfighting CINCs in time to ensure their success in the field? Let me assure you that much has been done to date, and that

continuing efforts will be made to bring our sealift capability up to the required standards.

To counter the loss of unit equipment shipping capacity in the U.S. Flag Fleet, the Ready Reserve Force was created. This inactive fleet presently consists of 94 ships and is programmed to grow to 120 ships by 1992. The Government has invested over $700 million in the acquisition, upgrading, maintenance and repair of the Ready Reserve Force. Our memorandum of understanding with the Maritime Administration will provide for the continued programmed growth and maintenance of the RRF. We will cooperate in every way possible to ensure this arrangement works in the manner Congress intended.

To improve our rapid response capability, we have 25 fully manned ships forward deployed in various areas of the world. Eleven prepositioning ships are located in the Pacific and Indian Oceans, as is one in the Mediterranean. These long term charter ships carry Army, Navy and Air Force supplies. Three maritime positioning squadrons, consisting of four to five ships each, for a total of 13 ships, are located in the Atlantic, Diego Garcia and in the Guam-Tinian area. Each squadron carries the equipment and supplies to support a full Marine Expeditionary Brigade of 16,500 men and support them for 30 days. These ships could be considered fast sealift in the sense that they are close to the scene of possible action and will be able to respond much quicker than ships that will have to load out and transit from the United States.

We have also bought and converted eight large containerships into high speed roll-on/roll-offs. These fast sealift ships can carry an entire mechanized division at sustained speeds of approximately 30 knots. They are partially manned and maintained in reduced operating status capable of getting under way from their layberths within 96 hours of notification. These ships are the fastest in our inventory and represent the state-of-the-art in fast sealift. Unfortunately, they are unique, and no others like them are available in the world's market, nor is it likely that any will be built by commercial interests in the future since these ships were not efficient enough to exist in today's highly competitive commercial market.

These programs were designed to compensate for the shortfall of militarily useful ships in our merchant marine. They will become even more important to our strategy if the merchant marine continues in its decline.

For the future, we have become highly sensitized to the importance of deploying our forces quickly. In depth studies are being conducted of the multifaceted aspects of the deployment process to determine the most cost effective and realistic means of improving our closure profiles, how fast we can get the tools of war to our fighting CINCs.

Obviously, fast sealift is one alternative to consider in improving the closure profiles, but other possibilities also warrant examination. For example, moving earlier on warning, a political decision, could allow us to get the men and material there on time. Increased prepositioning could presolve the time-distance problem, although prepositioning has certain inherent drawbacks in the expense, the vulnerability, and the lack of flexibility. Improving the unit readiness to deploy would permit their earlier availability at

the ports of embarkation, thereby allowing an earlier departure. We could build more airlift. These are only a range of options, and I address them only to point out that fast sealift is not necessarily the solution of choice. All these options must undergo cost and risk analysis and tradeoffs to determine the most effective means to support our troops in the field.

Again, I appreciate the opportunity to appear before the committee. I look forward to working with you as we address our mutual concern for improving this Nation's sealift capacity.

I will be pleased to answer questions if it is your pleasure, sir.

[The prepared statement of Admiral Arthur follows:]

PREPARED STATEMENT OF VICE ADM. STANLEY R. ARTHUR, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS FOR LOGISTICS

Mr. Chairman, members of the Subcommittee on Projection Forces and Regional Defense of the Senate Armed Services Committee, I thank you for the opportunity to participate in this hearing.

It is my wish that I may be able to detail the importance of strategic sealift to our national strategy, describe some of the associated problem areas and advise you of the efforts being made to support this vital function.

As my colleagues, Generals Cassidy and Otis, have indicated, the ability to transport men, equipment and supplies to battlefields or areas of confrontation distant to the United States is key to our national defense strategy. When we deploy any force of consequence, strategic sealift will be responsible for delivering 95 percent of the dry cargo and 99 percent of the petroleum products involved. The success of this strategic sealift mission is inexorably linked to the capacity and capability of the U.S. merchant marine to respond with the necessary men and ships. Unfortunately not only has our merchant marine continued to decline in numbers of ships but we also face a pronounced industry shift toward less militarily useful ships. These changes stress our ability to execute a military strategy that assumes and requires the ability to transport large quantities of diverse material on short notice.

For ease of reference, we in the business tend to divide our lift requirements into two basic categories. The first being surge unit equipment, the wheeled and tracked vehicles and helos—the basic warfighting machinery—required early on in a confrontation to flesh out our in-place forces and to marry up with troops being flown in. The second category is sustainment—the beans, bombs, bullets and spare parts needed to resupply and support our forces once they are in the field. This latter category lends itself well to being shipped in the large container ships that are becoming predominant in our merchant marine.

The most severe challenge in the deployment scenario is the shipment of surge unit equipment; equipments that for the most part are heavyweight and outsized and cannot be containerized or airlifted in the quantities required with the current or projected airlift asset levels. Unit equipment shipment times have become critical with the adoption of strategies dependent on rapid and major reinforcement for success. Navy programs have improved our ability to ship unit equipment but they have not been able to keep pace with the decline of the militarily useful merchant ships, nor were they intended to provide us an inventory of ships that of themselves are able to meet the requirements of a rapid deployment strategy.

This then is our problem—how do we get the needed equipment to our warfighting CINCs in time to ensure their success in the field. Let me assure you that much has been done to date, and that continuing efforts will be made to bring our sealift capability up to the required standards.

To counter the loss of unit equipment shipping capacity in the U.S. Flag Fleet, the Ready Reserve Force was created. This inactive fleet presently consists of 94 ships and is programmed to grow to 120 ships by 1992. The Government has invested over $700 million dollars in the acquisition, upgrading, maintenance and repair of the Ready Reserve Force. Our memorandum of understanding with the Maritime Administration will provide for the continued programmed growth and maintenance of the RRF. We will cooperate in every possible way to ensure this arrangement works in the manner Congress intended.

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tioning squadrons consisting of four to five ships apiece for a total of 13 ships are located in the Atlantic, Diego Garcia and in the Guam-Tinian area. Each squadron carries the equipment and supplies to support a full Marine Expeditionary Brigade of 16,500 men for 30 days. These ships could be considered fast sealift in the sense that they are close to the scene of possible action and will be able to respond much quicker than ships that will have to load out and transit from the United States.

We have also bought and converted eight large containerships into high speed RO/ROs. These fast sealift ships can carry an entire mechanized division at sustained speeds of 30 knots. They are partially manned and maintained in reduced operating status capable of getting underway from their layberths within 96 hours of notification. These ships are the fastest in our inventory and represent the state-of-the-art in fast sealift. Unfortunately, they are unique and no others like them are available in the world's market nor is it likely that any will be built by commercial interests in the future since these ships were not efficient enough to exist in today's highly competitive commercial market.

These programs were designed to compensate for the shortfall of militarily useful ships in our merchant marine. They will become even more important to our strategy if the merchant marine continues in its decline.

For the future, we have become highly sensitized to the importance of deploying our forces quickly. In depth studies are being conducted of the multifaceted aspects of the deployment process to determine the most cost effective and realistic means of improving our closure profiles; how fast we can get the tools of war to our fighting CINCs.

Obviously fast sealift is one alternative to consider in improving the closure profiles but other possibilities also warrant examination. For example, moving earlier on warning, a political decision, could allow us to get the men and material there on time. Increased prepositioning could presolve the time-distance problem although prepositioning has certain inherent drawbacks in its expense, vulnerability and lack of flexibility. Improving the unit readiness to deploy would permit their earlier availability at the port of embarkation thereby allowing an earlier departure. We could build more airlift. These are only a range of options, and I address them only to point out that fast sealift is not necessarily the solution of choice. All these options must undergo cost and risk analysis and tradeoffs to determine the most effective means to support our troops in the field.

I appreciate the opportunity to appear before the committee. I look forward to working with you as we address our mutual concern for improving this Nation's sealift capacity.

Senator KENNEDY. Thank you.

Mr. Gaughan.

STATEMENT OF HON. JOHN GAUGHAN, MARITIME ADMINISTRATOR, DEPARTMENT OF TRANSPORTATION

Mr. GAUGHAN. Thank you very much, Mr. Chairman.

Mr. Chairman, at the onset, I would like to say what an honor it is for me to appear before you as a successor to your father, who was, in fact, the first head of the Maritime Commission.

I have a prepared statement which I will submit for the record, and I would just like to highlight some of the points there.

As has been mentioned by both of my colleagues, the Maritime Administration is responsible for the husbanding of the Ready Reserve Force and the other ships in the NDRF, or the National Defense Reserve Fleet. Additionally, MarAd represents the U.S. Government on the Planning Board for Ocean Shipping, which is an arm of NATO, and is responsible for assuring the availability of vessels for sealift in a NATO war.

The Joint Chiefs, in conjunction with MarAd, are currently preparing a NATO sealift sizing study designed to address the supply/demand of merchant vessels for a European conflict. While we must await the results of this study for a more precise definition of

the shortfall and merchant vessel capacity, it is certainly fair to say, Senator, that a shortage exists.

MarAd recognizes that there are many alternatives that should be examined in order to find the optimal approach to meeting surge lift requirements. One of the ideas which has again surfaced to mitigate that situation is the fast sealift ship. MarAd prepared a feasibility study of such a ship as far back as the sixties, and in July 1982, we developed for the Office of the Under Secretary of Defense the design of a new cargo ship to be built to merchant ship standards. The ship design featured a large Panamax fast, 32 knot combination cargo ship capable of loading and stowing RO/RO cargo, break-bulk cargo, containers or any combination of these, all in a self-sustaining mode without the use of shoreside cargo handling facilities. The estimated cost per ship for a January 1984 contract was $245 million with approximately 38 months required for delivery of the lead ship.

Recently, the Navy has indicated a renewed interest in looking at the military utility as well as the commercial viability of a fast sealift vessel. Earlier, in June 1987, Admiral Thomas Hughes, Admiral Arthur's predecessor, wrote to me asking that we explore the commercial possibilities associated with surface effect fast sealift ships that might travel at speeds of 50 to 80 knots and deliver a payload of between 5,000 and 7,000 short tons. In my response, I noted that it was not a new subject to us, that we had conducted substantial research on such vessels some years earlier.

We have agreed to perform a preliminary economic analysis of surface effect fast sealift ships for the Navy, and I have assigned an in-house study team to this project.

That summarizes my statement, Mr. Chairman, and I am also prepared to address any questions that the committee might have.

[The prepared statement of Mr. Gaughan follows:]

PREPARED STATEMENT OF HON. JOHN GAUGHAN, MARITIME ADMINISTRATOR OF THE DEPARTMENT OF TRANSPORTATION

Mr. Chairman, and members of the Subcommittee on Projection Forces and Regional Defense. My name is John Gaughan and I am the Maritime Administrator of the Department of Transportation. It is a pleasure for me to be here this afternoon to review with you some of the important issues related to strategic sealift. While the focus of this hearing is on fast sealift ships to provide a more rapid movement of equipment during the initial surge deployment of a military force to overseas operational areas, I thought it would be useful to briefly outline MarAd's integral role in sealift issues.

About 95 percent of all equipment and POL needed in support of U.S. military forces abroad would have to move by sea. Most of this tonnage will have to come from the merchant fleet. In addition, the Government's Ready Reserve Force includes 94 vessels which are in a state of readiness to be available within 5, 10 or 20 days, and the national defense Reserve fleet contains 153 vessels which can be made operational within 90 days. Ships chartered to the military sealift command also would be utilized.

Unfortunately, the outlook for our merchant fleet is not encouraging. The number of ships in our liner fleet has fallen from 588 in 1970 to 182 currently, during which time the number of liner companies has declined from 20 to 7. Vessel tonnage has not declined because commercial ships have become larger. This has created a growing divergence between the military and commercial utility of merchant ships. Older vessel designs such as breakbulk and RO/RO have been largely replaced by large containerships, which while military useful, are of lower priority for defense purposes. U.S. operators have faced higher capital and operating costs as well as a burdensome regulatory regime compared to that experienced by their foreign competitors. This administration has dealt with the latter in the Shipping Act of 1984,

which significantly reduced governmental regulation. The operating-differential subsidy reform legislation proposed by the administration would go a long way toward further reducing capital and operating costs and further elimination of burdensome regulation. It would allow worldwide vessel acquisition and streamline operating subsidies. The proposal is pending in the Congress.

It is important that we improve the state of our merchant fleet to strengthen our ability to meet national security requirements. We are working closely with the Department of Defense to quantify the requirements for, as well as the availability of, merchant fleet support in wartime.

Department of Transporation (MarAd and Coast Guard) are also working with the Department of Defense, through the jointly sponsored National Port Readiness Steering Group, to improve the capability of commercial ports to handle military cargoes in an emergency.

MarAd also represents the U.S. Government on the Planning Board for Ocean Shipping (PBOS), an arm of NATO, which is responsible for assuring the availability of vessels for sealift in a NATO war. The Joint Chiefs of Staff, in conjunction with MarAd, is currently preparing a NATO sealift sizing study designed to address the supply/demand of merchant vessels for a European conflict. While we must await the results of this study for more precise definition of the shortfall in merchant vessel capacity, it is fair to say that a shortage exists. We and defense planners are concerned about the decline of the U.S. merchant marine.

We recognize that many alternatives should be examined in order to find the optimal approach to meeting surge lift requirements. One of the ideas which has again surfaced to mitigate the situation is the fast sealift ship. MarAd prepared a feasibility study on such a ship as far back as the 1960s. In July 1982, we developed for the Office of the Under Secretary of Defense the design of a new cargo ship to be built to merchant ship standards. The ship design featured a large Panamax fast (32 knot) combination cargo ship, capable of loading and stowing RO/RO cargo, breakbulk cargo, containers or any combination of these, all in a self-sustaining mode without the use of shoreside cargo handling facilities. The estimated cost per ship for a January 1984 contract was $245 million, with approximately 38 months required for delivery of the lead ship based on a 20-year life cycle cost.

Recently, the Navy has indicated a renewed interest in looking at the military utility as well as the commercial viability of a fast sealift vessel. On June 23, 1987, I received a memorandum from Adm. Thomas J. Hughes asking that we explore the commercial possibilities associated with surface effect fast sealift ships (SFS) that might travel at speeds of 50 to 80 knots and deliver a payload of between 5,000 and 7,000 short tons. In my response I noted that this was not a new subject for the Maritime Administration, since we conducted substantial research on such vessels some years earlier.

I received a second letter from Adm. William D. Smith, dated August 24, 1987, asking that we again sponsor research in the SFS area. I indicated to him our willingness to consider the commercial aspects of the vessel. However, I also pointed out that, as a result of the transition of MarAd's research and development program to a technology assessment program funded at a much lower level, funding assistance from the Navy to perform such additional research might be necessary.

More recently, my staff met with the Navy's director of strategic sealift to review the status of these efforts. As a result of this meeting, MarAd has agreed to perform a preliminary economic analysis of surface effect fast sealift ships for the Navy. I have assigned an in-house study team to this project.

In conclusion, we bring a strong commitment to the work underway and look forward to our continued close working relationship with the Navy in support of our Nation's strategic sealift requirements. We will fully coordinate all of these efforts with General Cassidy's U.S. Transportation Command (USTRANSCOM) as it begins to play the major role in our coordinated strategic airlift and sealift policies.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions that you or the other subcommittee members may have this afternoon.

Senator KENNEDY. Thank you very much, Mr. Gaughan.

I appreciate your references to my father who took great pride in serving as Maritime Administrator. As a matter of fact, even at that time there were ominous signs on the horizon about the whole merchant marine situation, going back even to the mid-1930s. I think even in your own comment here about what has been happening in recent times, all of us see a gradual and continuing dete-

rioration in terms of the kind of capability that would be necessary in terms of meeting military requirements.

PERSONNEL ISSUES

General Cassidy, before getting into the sealift, would you talk more about the personnel issues. Your comments were even more dramatic and stark than some of the other testimony that we have heard in other subcommittees with regard to personnel retention. Besides the pay, what are the other items that you find that the military personnel—your air personnel, pilots and others—are the most concerned with.

We have focused in the Manpower Subcommittee on a variety of different issues, such as the cost of moving, the temporary quarters, even the ability to get daycare. Another issue is whether dependents and spouses are able to find jobs.

Although pay is certainly one of the considerations, you also pointed out it is not the determining factor in terms of whether someone wants to serve in the Armed Forces. There are a number of other items that are of concern to the personnel in the different services with whom I have spoken. But if you could give us somewhat more complete items, I would certainly appreciate that as well. If you have some people on your staff who are primarily concerned with that, we would hope they would be able to visit with our staff as well to go over some of those items.

I think there is a keen, increasing appreciation for those issues, both in this committee and in the Senate generally, and we would like to be able to take a look at them.

SEALIFT

Senator KENNEDY. Let me now come back to the questions on our sealift. The testimony that was submitted by General Otis, which I referred to briefly in the course of my opening statement, identifies adequate sealift as vital to the Army's ability to accomplish its NATO objectives. He notes that more than 90 percent of the cargo for war must come by sea. He points out the critical role of sealift in meeting the national commitment to deploy 10 divisions to Europe within 10 days of a decision to reinforce. According to General Otis, it currently takes approximately three times the 10 day goal to move the six reinforcement divisions to Europe. Therefore, the capability through increased sealift to deploy the 10 divisions to Europe in 10 days would be a very real deterrent.

An additional reason that the issue of sealift comes into such importance is because of the general debate and discussion that we have had with regards to INF and the possibilities of making further progress in START. Obviously, it has brought greater focus in terms of the conventional capability of the allies and Western Europe, and put additional attention and requirement on those capabilities at a time when we see that our ability for reinforcement in conventional force are in very short supply.

First of all, General Cassidy, who in your opinion is responsible for developing and supplying fast sealift assets for your use?

General CASSIDY. Well, Senator, the specific and very quick answer to that is certainly the U.S. Navy. The Navy Military Sea-

lift Command is the component of the U.S. Transportation Command responsible to provide that sort of lift to the overall transportation effort.

However, we are finding more than ever before that you cannot look at one component of the transportation equation in isolation of the other two. And you cannot look at it from my point of view in only one direction.

General Otis' statement clearly and very succinctly tells you the story as it evolves toward Europe. I must look at the story as it evolved around the world. I think it unlikely that we would be involved in a protracted conflict, and that is what he discusses, in Europe, that we would not also be involved in some sort of deployment or involvement in the Far East and the Pacific Rim as well because the Soviet Union is on both of those fronts.

Therefore, I have got to look at all of it in total, and I find that to be somewhat akin to carrying a balloon full of water because as you affect any one of the elements, you affect them all.

For instance, if I could refer to the chart up there and try to quantify to some degree what that fast sealift gap would be, I have been sitting here wondering if I could do that for you. That would be very helpful to you, the committee, and certainly to me if I could say this is what we need, Senator, and this is how we ought to go about getting it, but I just cannot do that because it has many variables to it.

For instance, if you do buy a large amount of fast sealift ships, you still have to buy the equipment to go on them, the equipment that is now short in the prepositioned assets. So maybe you should focus first on an increase in prepositioning, and then make up for the shortage in prepositioning, whatever may remain, with some airlift, and then come in with a slug of fast sealift capacity to make sure we do live up to those commitments.

The burdensharing thing becomes very difficult for us because we find that our allies, too, are suffering from the same sorts of decline in their merchant fleets as we are, particularly those in the NATO alliance.

So it becomes very difficult to deal with and very difficult to give you a specific number. I think, though, that we must capture and get our arms around it in a very, very, orchestrated way, and that is why I called for some sort of a national effort to do it rather than just focusing on one specific element at the detriment of any others.

I am not sure, sir, I have answered your specific question. I hope I have helped.

Senator KENNEDY. Well, we will have a chance to get into that a little more later. My time apparently is up.

Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

BURDENSHARING

Gentlemen, I listened with great interest to your presentations, and you bring forward so many problems with the budget crunch that we are in right now that it just boggles the mind how we are going to solve this problem of burdensharing.

Admiral, you brought up a rather interesting point, I thought, with regard to the problem. I think basically you said if we had all of the sealift we could possibly use, *that is only part of the problem.* I think we had better keep our heads screwed on right on that. We cannot talk about the figures in open session like this, but I would just like to ask each of the three of our witnesses, do you generally agree with the chart that is up on the board? Is that pretty accurate of the situation as you view it?

Admiral ARTHUR. From my perspective, the early part of the chart is fairly reflective of the situation we face, somewhere in the interval after the initial day zero, we end up with a mismatch of the CINCs' desires and our ability to fulfill those desires.

As time marches on, we sort of catch up with that, and at some period of time we cross over, and we have excess capacity to go ahead and sustain him, again, very scenario-dependent. So somewhere out there we catch up.

I think the point that we are all concerned with is what happens in that early stage, and how critical is it in that early stage to meet the CINCs' requirements.

If we look at the 10 days to Europe scenario, sealift really is not a heavy player there with the scheme that we now have as far as when you can get the equipment to the ports of embarkation, get the ships there, get it loaded there, the transit times involved, get it offloaded and to the soldier in the field. Ten days is really stretching it to accomplish all that in one basket. You move out just a few more days and, of course, there is a place there where sealift is a major player as far as the heavy equipment coming on.

So I think our points on how much of the prepositioning that you have there, how much of the airlift you can devote to the heavy gear or the important gear that the guy needs, whether that prepositioning should be on the ground, should it be in ships, or can we go to the political decision of an early alertment which really solves a lot of ills as far as going.

Senator EXON. That was the point that I was keenly interested in and what was running through my mind as we were developing this scenario. Our needs depend on what scenario you are talking about. I remember this from a few years ago when I was very much involved in the purchase of those sealift ships. That was a great accomplishment. I suppose we could develop a scenario that would all but close that sealift gap, and pretend the problem doesn't exist.

Too many of the scenarios are based on a bolt-out-of-the-blue attack on Europe by the Soviet Union. Now, we have been so married to that bolt-out-of-the-blue theory for so long from the threat of an ICBM attack. However, we are pretty well convinced now that for various reasons, much of it classified, the Soviets just could not afford a bolt-out-of-the-blue attack in the nuclear scenario.

So I guess what you are saying is if we had 60 days of warning of a Soviet attack on ground forces in Europe, we could for all practical purposes close most of that gap, could we not, Admiral and get our troops overseas?

Admiral ARTHUR. Yes, sir.

U.S. FORCES

Senator EXON. The other problem that I think we have is that we always look at the U.S. forces today with great concern. As General Rogers testified before our committee on several occasions, the Soviets might be able to overrun our troops or our allies'. In fact, another way to solve that, I suspect, is if our NATO allies could have a better understanding of the geopolitical situation, recognize that it is their land that would be overrun by the Soviets, and hearken back to the attack by Adolf Hitler. Everybody, looking back at the Blitzkrieg, could see what was happening, and I would hope that whoever the President of the United States would be at a time when the Russians might threaten, that he would move much earlier to put that in perspective. Warning is one thing; acting on it is quite another.

It seems to me we have got to do a little bit more, and maybe a whole lot more with regard to our NATO allies. How much do they want to defend their territory? There is entirely too much of, I suggest, them looking to the United States as their ultimate defender, not only from the standpoint of the nuclear deterrent, but also from the standpoint of how quickly are we going to get our troops and our supplies over there. It is well known that our NATO allies do not even have enough ammunition to stop a Soviet thrust.

The point I am trying to make is I am not sure we are going to be able to solve all of these problems here. I think we had better take a very big look at this overall picture and we and our allies should be sitting down and talking and planning concrete actions, our leadership here and their leadership over there.

That is one question.

NAVY PILOTS

Now, I want to get into the very serious matter that you brought up, General Cassidy, about the pilots, and I assume, Admiral, that we are having about the same situation with the Navy pilots, or is it quite as bad?

Admiral ARTHUR. We are having the same difficulty, but I do not believe we are as critical in all of our pilots as the General is with his specifically, but we do have, especially in our tactical pilots off the aircraft carriers, we have seen a dramatic downturn in their retention.

Senator EXON. Thank you. My time is up, Mr. Chairman.

I thank you.

Senator KENNEDY. I think the question is in reading back through history, there have always been some indications of potential activity, those countries which have been the recipients of that adverse reaction have been pretty slow in responding or believing that those accumulations of personnel or those indications on the other side were real. History has taught us this time and time again. I think what we have to try and do is find out whether we really have a problem; if it is going to take us 60 days, then should that be the rule for the rest of our priorities of where we are going to be expending resources?

As Senator Exon knows, we have had an excellent study done by Chairman Levin that points out that the greatest advantage for the

Soviets is with a fast operation, a more expedited movement or invasion in terms of Western Europe. That is their greatest advantage in terms of the various war games that have been played. Now, if that is the case, it makes a stronger argument in terms of the need for fast sealift.

We have to have at least recognition that if the commander in Europe believes that there is the real possibility of using nuclear weapons, if we are not able to get our reinforcements over there, then those factors ought to be calculated as well. And if we are talking about the real danger of conventional war between the NATO countries and the Warsaw Pact, which I hear both this administration, the President, the Secretary of Defense and others talking about, and the need for greater progress in terms of conventional force improvements, we have got to decide whether enhancements to sealift capabilities are a crucial step in this direction.

That is something that is of concern to me.

SEALIFT

Admiral, earlier I asked General Cassidy about who has the responsibility in terms of building the fast sealift, and they mentioned the Navy. Do you agree with that?

Admiral ARTHUR. Yes, sir, I do. We do have the responsibility to continue to put the pressure on the system to try to develop a sealift capability. And with Mr. Gaughan at MarAd, we have a responsibility to levy the requirements on him to bring his forces to bear as far as being able to manage an RRF force so that we have the ability to fall back on useful merchant shipping and to bring it into the fray.

The fast sealift ship itself has been a long-term program. We have been actively involved in it from the study standpoint since probably 1979 or earlier timeframe. Since 1984 we have owned a 200-ton surface effect ship we keep down at Patuxent River and continue to work on and test new equipments on.

And we are scheduled to try out a new ride system, in other words a system designed to see if we can improve the ride and ship-handling capabilities of the platform in rough seas. So we have not totally ignored the technology that exists.

But bringing that into a useful size is the challenge—we would like to at least be able to carry 5,000 short tons of unit equipment, which would make it a very useful platform. We are still pacing around that one as far as what is the cost, what is the cost-benefit of the speed, or should we go back and find something that has half the speed and maybe three or four times the load-carrying capability.

So we are working with Mr. Gaughan, and we asked him to examine for us whether there is a commercially viable reason for developing a fast sealift ship, to see if we can make that economic tradeoff of what is the best direction to go.

Senator KENNEDY. As I think General Cassidy pointed out, because of the failure to move in the area of lift, the Goldwater-Nichols legislation sought to bring some focus to the whole lift issue.

In the late 1970s, we had the very modest acquisition of the SL-7 fast sealift ships. At the beginning of the 1980s, we had studies about the need for additional fast sealift. But despite the very substantial build-up, the real growth in the Defense budget through the 1980s, we have had virtually no progress in meeting fast sealift needs.

Now, I do not think that dollars in and of themselves are the bottom line in priorities, but they are a pretty good indicator. And I think there is a fair question that you probably keep hearing from me, and that is, what is the Navy going to do about fast sealift?

It seems to me we have had a lot of studies. When is the Navy going to give this the priority that it should have? Does the Navy think that this is a much lesser priority than building other types of ships? One would certainly have to draw that conclusion.

And once we have been able to focus where the responsibility is and who is going to be held accountable, I would think that there are going to be questions each and every time that the Navy comes up here talking about ships and talking about their needs about why these ships are more necessary than fast sealift ships, particularly when you have the kind of statements that have been made by the commander, like General Otis, who is a commander in chief.

Has not the time for more studies really passed? And is there not a need for sustained attention on sealift capability now?

Admiral ARTHUR. We have invested during the period of this administration, as you refer to, a period of increasing resources; we have invested in strategic sealift more than has been invested since World War II up until the time of this administration.

So it is not for lack of effort in this area. One of the problems that we face is that the requirement is——

Senator KENNEDY. What is that figure? Can you get that for us?

Admiral ARTHUR. I will have to doublecheck that number.

Senator KENNEDY. Well, I would like you to check both the number and what it means in terms of ships.

Admiral ARTHUR. Yes, sir, I will provide that to you for the record.

[The information follows:]

Our fiscal years 1980 through 1988 appropriations provided:

$2,414,525,000 for the construction, acquisition and conversion of a force encompassing:

8 Fast Sealift Ships (FSS);
95 Ready Reserve Force Ships (RRF);
2 Hospital Ships (TAH);
10 Auxiliary Crane Ships (TACS);
2 Aviation Logistics Support Ships (TAVB).

$3,136,829,000 for the operation and maintenance of the above force, for the charter of 13 maritime prepositioning ships, and for the support of the Military Sealift Command organization.

$551,300,000 for the procurement of sealift enhancement features, communications equipment and ship to shore cargo delivery systems.

$42,772,000 for the development of sealift enhancement features and ship to shore cargo delivery systems.

The foregoing appropriations total $6.15 billion dollars.

The fiscal year 1989 Presidential submission requests an additional $600 million dollars. Thus the total for fiscal years 1980 through 1988 and requested for fiscal year 1989 is $6.8 billion dollars.

SHIFTING REQUIREMENTS AND STRATEGIES

Admiral ARTHUR. The issue becomes one of shifting requirements and shifting strategies. Each time we design a new strategy, the requirement for sealift changes. And so we have found ourselves in the situation that you allude to, where it appears that we have not made progress.

We have put an awful lot of equipment at sea. We have put a lot of good, useful ships into the RRF. And we have spent a lot of time trying to figure a way to keep the maritime industry along with us, so that commercially usable ships, where they can compete in the world market today, will also turn around and be a very useful ship for us.

That is a very hard equation.

Senator KENNEDY. If you read Mr. Gaughan's statement in terms of that very point, you cannot get much satisfaction in terms of what has been happening over the recent years. He talks about the reduction in terms of the number of ships in our liner fleet. It has fallen from 588 in 1970 to 182 currently, liner companies, 20 to 7.

On page 2, older vessels, have been replaced by larger containers which, while militarily useful, are of lower priority for defense purposes. I mean, all the trend lines are going in the wrong direction, it would appear to me.

STRATEGIC SEALIFT FUNDING

The final point I would say with regard to all of the new Navy strategies—and we are familiar with those—there has not been a significant change in NATO strategy that I am familiar with since the late 1960s. There has been a pretty clear and understandable commitment which has been ongoing, continuing, and enduring. There has been some modification in terms of the prepositioning of some equipment. But in terms of the basic number of divisions and moving those divisions to Europe, do you think that there is any new strategy reflected in the testimony that General Otis has given us?

Admiral ARTHUR. There has been a considerable difference in the amount of equipment associated with that strategy. I believe we can say with relative assurance that the size of the POMCUS in requirement has probably doubled since the time that we first decided on what POMCUS should have.

And I believe it is in General Otis' statement, not all of it can be put on the ground over there now because of facilities and for other reasons. So again, the growth in that will fall back on the sealift requirement. So equipment that was once thought to be on the ground forward, becomes a requirement to lift from the United States.

So that keeps moving around with us.

Back to your earlier question, I show about $7 billion from 1980 to 1989 that we have invested in strategic sealift funding.

Senator KENNEDY. Well, will you tell me what in the world we have spent $7 billion from 1980 to 1989 on?

Admiral ARTHUR. Our maritime prepositioning ships——

Senator KENNEDY. Give me the ships. Tell me exactly how; $7 billion from 1980 to 1989. You tell me exactly how that has been expended.

Admiral ARTHUR. We spend in the neighborhood of $300 million a year just to support the operations of the maritime preposition ships.

Senator KENNEDY. Okay. You have $4.0 billion to go. Please supply it for the record. I mean, I just think that is extraordinary, that we have spent that amount of money, $7 billion, from 1980 to 1989 and we are in the kind of condition that we are now.

We want to find out more about that.

[The information follows:]

Between fiscal years 1980 and 1989 the Navy will spend approximately seven (7) billion dollars on strategic sealift. Our fiscal year 1980 through 1988 appropriations provided:

$2,414,525,000 for the construction, acquisition and conversion of a force encompassing:

8 Fast Sealift Ships (FSS);
95 Ready Reserve Force Ships (RRF);
2 Hospital Ships (TAH);
10 Auxiliary Crane Ships (TACS);
2 Aviation Logistics Support Ships (TAVB).

$3,136,829,000 for the operation and maintenance of the above force, for the charter of 13 maritime prepositioning ships, and for the support of the Military Sealift Command organization.

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Senator KENNEDY. Senator Exon.

COMMERCIAL FLEET

Senator EXON. You know, I think what we are talking about here requires some really unique possible thinking, that we are going to provide for some kind of an eventuality like this. We have talked about, you know, having our commercial fleet available in times of war, but it is not very adaptable to most of these things.

But if, for example, if we could take all of our commercial fleet tomorrow and start converting those in a few days to some kind of carriers to transport equipment to Europe, if we took all of our commercial fleet and dedicated it to that purpose, would we have enough airlift under that kind of scenario to fly over the troops? If that would work, would it solve this problem?

General CASSIDY. As you deal with the increased requirement and you increase the speed, you put a bigger burden on airlift. In other words, as you get the equipment there quicker, then you must get the people to go with it quicker, and all of the people will go by airlift.

But there is an airlift capacity today to handle people sufficient to the need, yes.

Senator EXON. People.

General CASSIDY. Yes, sir, people.

We have a shortfall in cargo capacity airlift, and that is what we are working toward with the C–17 and the Civil Reserve Air Fleet modifications that are under way now. That is what I alluded to in my statement, that I believe further solution will be more use of the Civil Reserve Air Fleet, putting military features on each airplane that is built in this country, even though it goes into commercial use.

Senator EXON. Or to put it another way, General, if we had the money and the place to store equipment that would be needed in Europe, we could get the tank drivers over there to meet the problem. But only if we had enough prepositioned war materiel and equipment there to do the job, right?

General CASSIDY. That is correct, sir. If I may, I would add a couple of caveats.

First of all, either equipment already there or that would be there in sufficient time that it will be usable. You do not need it all right away. You need it in a rather graduated moment.

The other thing that we must consider is the readiness of those units to move. Even though we would have everything fully prepositioned, full POMCUS sets in Europe, most of the forces that we would move reside somewhere in the Reserve Forces and they must be ready to move. You just cannot mobilize the force overnight.

That then leads us back to some of the considerations you talked about philosophically a few minutes ago. I think in this equation there are several things we must consider up front.

And one thing I think this new Transportation Command will be able to do will be to give National Command Authority how much and when in a very deliberate, very correct sense, and very quickly. That will put a premium on the things you talked about, such as warning: How will we look at warning, how will we use that warning, what will we use it for?

It will put a premium on decision: Will we be able to get a decision out of the National Command Authority quick enough to do some things? Certainly we could start moving troops to Europe at the least sign of trouble over there on ships, and that would not require a declaration of war. It may be deterrent in nature.

On the other hand, it may be very provocative in nature, and we would have to assess that. So that part of the equation will be terribly important to us. Are we going to use the warning light? Will we get the decision early enough that we can start to move and then obviate some of those gaps in the lines that you see?

The other thing is the time element. Must it be done quickly? Must we do it in 10 days? Will 12 be good enough or 15 be good enough? That time element becomes critical to what we have to do.

And then once again, I think the very key and we cannot ignore it is the readiness of the units to be moved. There is no need for us to put an awful lot of money into very fast things such as fast ships and airplanes to move things quickly that will not mobilize for 3 or 4 days to begin with.

So once again, I do not intend at all to be evasive, but I am finding more and more that there are so many elements to this, that we must think about it in a coordinated way.

AVIATOR PROBLEMS

Senator EXON. Admiral and General, let us get back to the aviator problem. I take it, then, that we have made massive strides and put an awful lot of money into improving the lot of our people in the armed services. I suspect that you would agree that, while they are certainly not overpaid, we are not having the problems in the Armed Forces generally, except with aviators and primarily with the aviators who fly the plane most akin to our commercial fleets. Your statistics show a rapid decline from the 70 percent down to the 30 percent level in pilot retention.

Where are those people going? Are 80 percent of them going into commercial airlines?

General CASSIDY. Just short of 80 percent, sir, somewhere around 75 percent. It varies monthly.

Senator EXON. So that is our competition?

General CASSIDY. Sir, there are two things that are our competition. One is the economy of our country is in good shape. Over history, when the economy of the country is in good shape, our retention figures in the Armed Forces are generally low.

When the economy is bad, our retention and recruiting is very good. So that affects it to some degree.

Senator EXON. So one way we could solve the problem would be by having a depression, I take it? [Laughter.]

General CASSIDY. I stopped short of that and I am not suggesting that, Senator. [Laughter.]

But it is a fact that we have to live with, and we factor that in when we say here are the numbers of people we need to recruit. So we understand that well.

Then we see, as you pointed out, the commercial airlines is a big draw. And it is a big draw particularly now, not just because they are growing because of a good economy, but when we transformed the air service of our country into a turbine-powered fleet from a piston-powered fleet several years ago, we increased that part of that industry by several orders of magnitude.

Those pilots who we hired then in great numbers are getting to age 60. So biology is getting to us. They are going to become age 60 no matter what we do.

Last year, for the first time in our country's history the airlines hired more pilots than the Air Force produced. Next year, the airlines will hire more pilots than the U.S. Navy and the Air Force will produce. That is the situation we find ourselves in.

If I could, I will take a few moments to tell you that our people are faced with uncertainties in their lives today that they have not had before.

Certainly, in the early eighties we did lots of things to help out the Armed Forces. We increased the pay, we increased the aviation career incentive pay. We increased housing. We did lots of things, and our retention rate then got to the highest in its history.

As a matter of fact, we saw in the years 1982 and 1983 the fastest swing from low retention rates to high retention rates in our history. For 4½ years, it swung from the very lowest figure to the very highest figure—a reaction not necessarily to just the things

you could touch and feel, but I believe a reaction showing a commitment on the part of the country to the people.

They react to that. Particularly pilots react to that. Pilots are a fickle lot, they really are. They react to who loves them the most to some degree. And if they get some notion that we do not do that, that their country does not appreciate the sacrifices they make, they have got options.

These guys are all college-educated. Forty percent of them have masters degrees and they are damned good pilots. They can get a job anywhere tomorrow. So if they do not think you love them, they are going to say goodbye.

Now let me tell you what they are faced with. They see coming from all directions uncertainties in their lives. For instance, we are faced with an officer reduction. We are faced with a massive O&M cut this year, and it looks like maybe we will be faced with some of that next year.

They are seeing a general decline, at least level, which for us out in the field is a decline, in the Defense budget. And therefore, they believe that people are less concerned about defense today than they were before.

They see things in the MWR—morale, welfare, and recreation—capability costing more money. They see even in some cases a run on whether or not we should have officers clubs in the Armed Forces. And they see all of these things coming together.

Not one of them in particular is debilitating to them, but they see them coming from each direction and they wonder what the heck is going on. They have got some options, so they say, so long.

Now, we can entice a few of them back in with money. For instance, the aviation career incentive pay that we increased in 1981, the value of that now is 29 percent less than it was then. There has not been an increase in the ACIP since that time. So that has got some influence on it.

But it is just everything, Senator, I guess. And we cannot cure everything. I think we have got to make some improvements on the margins.

Senator KENNEDY. Would the Senator yield for just one point?

Senator EXON. Sure.

Senator KENNEDY. It is difficult for me to believe that these pilots think Eastern Airlines loves them more than the Air Force. [Laughter.]

General CASSIDY. That is a specific, Senator. I appreciate that.

Senator KENNEDY. You do not have to comment.

Senator EXON. Have you sold these pilots on the proposition that we maintain our airplanes better than some airlines?

General CASSIDY. Oh, yes, sir. As a matter of fact, they know that. And the pilots do not always leave us. We have very few pilots, when you sit them down and say, are you mad at us, is that why you are leaving? Not at all, not mad at us.

I think it is the same thing with the Navy. They are leaving for other reasons than that. And they know we maintain airplanes better and we fly airplanes better than anybody else in the world today, and they will tell you that.

Senator EXON. What is the commitment, General, of an 18 year old who wants to become an aviator? If he meets all of the qualifi-

cations and you are pretty sure he is going to be a good one when you get through with him. What commitment does he have before he goes to flight school? Is it 4 years? Is it 8 years? What is it?

General CASSIDY. He has an 8-year commitment after he graduates from pilot training.

Senator EXON. After he graduates from pilot training, he is committed for 8 years?

General CASSIDY. Yes, sir. And that has just been increased. We have increased it from 6 to 7 to 8 in the last 3 years, sir.

Senator EXON. What is your solution to the problem? Now, you have told what the problem is. I am saying, do you say, okay, we want a 12-year commitment from you but we will guarantee that you are going to have a job for 20 years, and then you can have a retirement of so much?

What is your solution to the problem?

General CASSIDY. Well, sir, we are doing many things now. I want to leave you with the notion that we are working the problem very hard and there are internal things that we can do, must do, and should be doing, that we do not have to come to the Congress for.

For instance, in my command, the Military Airlift Command, we are trying to provide an element of stability in the command that has not been there before. There are 12 separate actions that have been going on, that we have had the pilots in and worked with to say, how could you do this and what would you do better, and we are working that.

Things change a lot. In our relationships with the commercial airlines, we buy a lot of commercial airlift. And we are working that together with the commercial airlines right now.

We are also going to the commercial airlines and saying: Hey, do not take our guys when they have got 8 years in the service; wait until they have got 20 years in and have given us their first flying years; you hire them when they retire from the Air Force.

They are doing that now for the first time in the commercial air industry's history. They are hiring retired Air Force pilots, which is good for both of us. I am interested in having those kinds of pilots in the airlines rather than some of the ones we have seen in the past.

So we are working internally. Now then, what do we need from external sources? We need some dialogue with the airlines to make sure that they do not undercut us. And we are doing that right now through organizations like the National Defense Transportation Association. We have that dialogue going with about six of the commercial air carriers.

And then we will need to come to Congress also and do some things. We need to increase some pay. We need to provide some stability in their lives.

Senator EXON. General, let me stop you there. Increase pay across the board or increase pay for pilots?

General CASSIDY. Pilots.

Senator EXON. Pilots only?

General CASSIDY. Right on, sir, pilots only. I talked about a 4.3 percent pay raise. We need that for the entire force for lots of other reasons.

Senator EXON. Right.

General CASSIDY. But now we need——

Senator EXON. But 8 or 10 percent for pilots maybe?

General CASSIDY. Not total pay. We need to see an Aviation Career Incentive Pay Program increased. We have come across in the President's 1989 budget with some figures for that, and we hope you will support that.

Sir, if I may make one postscript, to get an aircraft commander, instructor, pilot qualified in a C–141 costs me over $4.5 million. I have got that tied up in him. It takes me about 4½ years to do that. I cannot buy it off the street.

I can get a lawyer off the street. I can get a—excuse me. [Laughter.]

Senator KENNEDY. And you can get a politician off the street. [Laughter.]

General CASSIDY. That was your choice of example, Senator.

And you can get civil engineers out of the colleges. But you have got to build a pilot and you have got to build a good combat pilot. That is where we are coming from. So we need to invest a little bit in doing that, sir.

I do not want to leave you with the example that money will solve a problem. We have to do other things. I think our country has to, as well as we the services, and we are working on that.

Senator EXON. Thank you, General.

Thank you, Senator.

MOBILITY STUDY

Senator KENNEDY. I have another question for you, Admiral, before I go to Mr. Gaughan. The 1981 study, the congressionally mandated mobility study, showed the need for airlift, sustaining sealift, and fast sealift. And since that study we have initiated that C–17. That is $40 billion through the 1990s. We increased the Ready Reserve Fleet and marine prepositioned forces, which as I understand from staff is a good chunk of that $7 billion. But we have done virtually nothing for fast sealift. That is what I think is the major concern. Certainly it is the concern of this Senator, and I would think it would be for the services generally.

Admiral ARTHUR. If the price of fuel had stayed down and the commercial market had stayed in the SL–7 business, we would have had a lot more than the eight SL–7's or the fast sealift ships that we now have under contract. And they make magnificent platforms.

The 30 knots is good speed, and the 10,000 short tons of unit equipment that they can haul make a significant impact.

When we look around at what is the next step, what is on the market today that we can buy, there is nothing like that in existence. So we are committed—we have to commit to a program that either revitalizes that particular class of ship, which is really in its present configuration unable to compete in the open market, so Navy would have to buy it and turn it over to the RRF, or invest in a faster new concept of ship, the surface effect or fast surface effect ship. That is a significant investment.

And again, the economic analysis of, is that the best buy for the money or should we go back and buy and create an SL–7 class of some configuration, something under $300 million a copy?

You know, we are in the position right now of trying to study that equation and find out what is the best bargain, and that is why we have asked Mr. Gaughan to take a look and see if there is a commercially viable use for the fast surface effect ship, because if there is, then we can, in concert with industry, come to a situation where we can both participate and reduce the burden on the Department of Defense and give the maritime industry a platform that they can compete with in the market.

I just do not know how that will turn out.

Senator KENNEDY. Mr. Gaughan indicates that that fast sealift vessel would cost about $245 million. That is on page 4. Is that a good buy?

Admiral ARTHUR. Those are your prices—we are estimating, and this is a very rough estimate, something like $700 million, to put that first one prototype in the water and start working with it.

READY RESERVE FORCE

Senator KENNEDY. Mr. Gaughan, the OMB designated your agency as having the sole responsibility for the Ready Reserve Force. What does this entail, and what is your relationship with the transportation command?

Mr. GAUGHAN. Senator, the decision in the 1989 budget was a decision to consolidate the program management and the funding for the RRF back in the Maritime Administration. That is the way it was prior to 1982. That does not change in my view the responsibilities that I have been carrying out all along.

And that was, in brief, that the Department of Defense decides what the requirements are and then, based on the ships that I have, we figure out how to use those ships. So the decision did not change the relationship of the responsibility for sealift and those requirements, which clearly lies within the Department of Defense.

Our relationship with U.S. TRANSCOM is akin to probably being on our second date with each other, because it literally just came into existence as a result of the Packard Commission. But I would have to say that it looks like it could be a flourishing romance, to take that example a step further.

I have already had the opportunity to visit the General's command at Scott Air Force Base. We have begun to delve into all of the complexities associated with providing this sealift, the challenges facing the commercial fleet out there, and the United States and in fact our NATO allies.

I think if I could divert for a moment, you asked why there had not been an addressal of sealift. And I think in fact there has been a tremendous effort on the part of the Department of Defense to address it. But they have been faced with a situation where the ships in the commercial service which had the greatest military utility are now passing from the scene.

So you do not have, as new ships come on, immediate replacement for the capability that had been there.

You are also faced with a worldwide maritime depression, which was not in the control of the Department of Defense, which in fact put tremendous stress on not only U.S.-flag operators, but operators around the world, causing some of them to go into bankruptcy.

As those circumstances occurred beyond the Department of Defense's control, the establishment of the Ready Reserve Force reflected a realization of what was happening. The sealift enhancement program, probably part of that $7 billion, consists of seashed and flatracks to provide platforms, if you will, for outsized equipment to be able to fit into the modern container ship.

The craneship program allows these non-self-sustaining container ships to be offloaded in areas where you do not have the tremendous infrastructure of an intermodal facility, such as the one in Baltimore at Dundalk Marine Terminal.

Those were all responses to a situation which was rapidly changing, which the Department of Defense, quite frankly, really did not have that much control over. And those types of questions and issues are the things that the three of us have already spent fairly extensive time talking about, in order to better understand our individual and mutual problems and responsibilities.

R&D CAPABILITY OF MARITIME ADMINISTRATION

Senator KENNEDY. What is the research and development capability of the Maritime Administration?

Mr. GAUGHAN. Our capability is in the neighborhood of $1 or $2 million a year, sir. In the Office of Technology Assessment, part of its responsibility is the military sealift program. But that is at the $100,000 level, sir. I do not have an R&D budget of more than——

Senator KENNEDY. That is a pretty limited capability for doing all of the things that appear to be necessary to deal with some of the adjustments which you have mentioned here.

I think it is important that we find out who is going to be doing what and what their capabilities are, so that we are able at least to measure some degree of progress, and also to be sure to give the kind of support needed, if that is the will of both the committee and the Congress as well as the American people. But I think if they understand what really is at risk here they will be convinced that sealift cannot be shortchanged. It is a very essential element in terms of our national security.

I want to thank all of you very much for being here. We would like to continue to work with you on these matters and other matters. I appreciate very much your response to the questions, and if you would be good enough to supply some of those written responses I would be grateful, too.

The committee stands in recess.

[Questions for the hearing record with answers supplied follow:]

QUESTION SUBMITTED BY SENATOR EDWARD M. KENNEDY

STRATEGIC SEALIFT

Senator KENNEDY. How has the Navy spent it's strategic sealift dollars since 1980?

Admiral ARTHUR. During the course of the hearing I indicated that between the fiscal years 1980 and 1989 the Navy would spend approximately seven (7) billion dollars on strategic sealift. Our fiscal year 1980 through 1988 appropriations provided:

$2,414,525,000 for the construction, acquisition and conversion of a force encompassing:
8 Fast Sealift Ships (FSS);
95 Ready Reserve Force Ships (RRF);
2 Hospital Ships (TAH);
10 Auxiliary Crane Ships (TACS);
2 Aviation Logistics Support Ships (TAVB).
$3,136,829,000 for the operation and maintenance of the above force and for the support of the Military Sealift Command organization.
$570,260,000 for the procurement of sealift enhancement features, communications equipment and ship to shore cargo delivery systems.
$42,772,000 for the development of sealift enhancement features and ship to shore cargo delivery systems.
The foregoing appropriations total $6.2 billion dollars.
The fiscal year 1989 Presidential submission requests an additional $600 million dollars. Thus the total for fiscal years 1980 through 1988 and requested for fiscal year 1989 is $6.8 billion dollars.

Questions Submitted by Senator Richard C. Shelby

MARITIME INDUSTRY

Senator Shelby. Do any of you have any concrete proposals to reverse rapid decline of the U.S. maritime industry?

Admiral Arthur. The decline of the U.S. maritime industry is the result of Free World economic forces which are beyond the capability of the Department of the Navy to alter. We believe that the condition of the industry is such that it deserves the highest and broadest level of national attention.

Senator Shelby. Are there Federal funds available to assist during this time of economic constraint?

Admiral Arthur. I am not aware of any Federal funds available or earmarked for the support of the maritime industry at this time.

Senator Shelby. Are foreign vessels subsidized?

Admiral Arthur. I will defer to Mr. Gaughan for detailed accuracy regarding this question, but to the best of my knowledge, many, if not most foreign countries possessing a flag merchant fleet subsidize those fleets in one way or another.

Senator Shelby. Can ships built for fast sea lift also be used for commercial purposes?

Admiral Arthur. Whether the conceptual surface effect fast sealift ship has a commercial application is the subject of an internal study being conducted by the Maritime Administration.

MERCHANT MARINE PROTECTION

Senator Shelby. Do we have enough ships available to protect our merchant marine force during time of conflict?

Admiral Arthur. We have met our minimum force level objective of 101 frigates to protect our convoys and underway replenishment groups during wartime. We have 31 DD 963 class destroyers against our force level objective of 37. There are no plans to construct additional DD 963s.

Senator Shelby. Have Soviets' new, quieter submarines affected our plans for cargo protection?

Admiral Arthur. Although our assessment of Soviet intentions does not call for them to conduct an intensive campaign against the sea lines of communication, it is a contingency for which we must be fully prepared. We continually examine the capability of our escort forces to deal with more capable and/or more numerous threats, and have made several major steps toward improving the surface forces nationally assigned to the protection of shipping role. A primary example is the changeover from the SQR-18(V)2 tactical towed array sonar to the SQQ-89 ASW Combat System on the Naval Reserve Force FFG 7 class; we are also examining the FF 1052 class frigates in response to threat quieting.

PREPOSITIONING VERSUS SHIP BUYS

Senator Shelby. What is the cost tradeoffs between prepositioning more equipment in Europe and building more cargo ships?

Admiral ARTHUR. Cost tradeoffs in buying and prepositioning more equipment in Europe versus the cost of acquiring and operating or maintaining more cargo ships is only part of the equation. The real trade off is between the lower of the costs of prepositioning versus ships and the ready availability and accessibility of the required warfighting equipment. In short, "What price readiness." These cost tradeoffs have not been developed. A study is ongoing to update our prepositioning, airlift and sealift requirements. Once those requirements are in hand, we can attempt cost analysis tradeoffs and examine their effects on readiness.

U.S. MARITIME INDUSTRY

Senator SHELBY. Do any of you have any concrete proposals to reverse the rapid decline of the U.S. maritime industry?

General CASSIDY. It is very difficult to give you a specific and singular proposal to this complicated problem.

The maritime industry has been declining for years despite government laws, programs and subsidies many of which have been based on recommendations of various commission's legislative interest. Government initiatives have slowed the industry's decline and on occasion have briefly energized it, but have not reversed it. This is a commercial industry which is no longer internationally competitive. I suggest a prolonged solution lies not with protecting the industry, nor nationalizing it, but rather with working to make it commercially competitive in international shipping.

The decline of the industry is a national problem. DOD is a customer of the maritime industry, and should not be looked upon as the means for reversing the decline. The first step should be to orchestrate a national sealift policy which focuses on the interests and needs of both the public and private sectors.

MTM/D PLATEAU FOR AIRLIFT

Senator SHELBY. Have you factored in the budget cuts that will be necessary in the next 5 years in your plan to reach the 66 MTM/D plateau for airlift?

General CASSIDY. Funding levels included in the fiscal year 1989 amended President's budget are still adequate to meet the mid-term objective for airlift and the long term goal of 66 MTM/D by fiscal year 1998. However, we are at the margin and any further reductions in airlift funding could impact our ability to achieve required airlift capability. Slippage of the C-17 would definitely extend the time required to reach our goal.

AIRLIFT AND SEALIFT PROBLEMS

Senator SHELBY. I am struck by the fact that we face serious problems in airlift and sealift and (sic) that the House has added nearly $350 million for C-130s and KC-10s to the National Guard and Reserve budget. This add-on coincides almost exactly with a drop in the production lines for Lockheed, and looks and smells very much like pork. Could you comment for the record on the extent to which these purchases will help correct the high priority problems in airlift, and to which such expenditures seem justified, given the fact you did not include them in your original budget request?

General CASSIDY. The Worldwide Intratheater Mobility Study (WIMS) recently documented the requirements for theater airlift. Our current 9,000 tons/day capability is woefully short of the 20,000 tons/day requirement quantified in WIMS. While the fiscal year 1989 PB did not address added C-130 assets, any modernization of this mission area helps address the shortfall. I support any initiative that provides added wartime theater airlift for the theater commanders.

QUESTIONS SUBMITTED BY SENATOR JOHN MCCAIN

Senator MCCAIN. I have come away from this hearing with the clear impression that we have an unsolvable problem, and there is no prospect that we can meet our commitment to NATO of deploying 10 divisions in 10 days, much less sustaining them. I have a strong feeling that we not only do not have the solutions to this problem, but that we'll see it grow much worse in the light of reduced defense spending. Could you be more specific in describing just how shortfalls in our air and sealift capability now limit our ability to close Europe?

General CASSIDY. [Deleted.]

SHORTFALLS IN DEPLOYMENT

Senator MCCAIN. Provide for the record a classified statement outlining a comprehensive picture of the present shortfalls in terms of how they will delay or constrain deployment by major combat unit, type of support unit, and supply and equipment category.

General CASSIDY. [Deleted.]

Supply and equipment category: The range of problems in this area is too complex for a quick answer, but some illustrations can bring the magnitude of the problem to light. Preferred munitions, a category of ammunition including smart weapons for both the Army and the Air Force are in critical demand. Sufficient items do not exist and defense budget cuts will increase procurement difficulties. Medical supplies and equipment are also critical, as are major repair assemblies and many spare parts. The industrial base does not have the surge capability to provide these items in a rapid manner. In the current reinforcement plan 71,000 short tons of sustainment supplies compete with combat units for critical airlift resources in the 10 day problem. Sufficient sourcing and warehousing could enable this supply requirement to be prepositioned.

SHORTFALLS IN DEFENSE SPENDING

Senator MCCAIN. Could you also indicate how these shortfalls will change over the next 5 years, and exactly what level of increased defense spending would be required to correct them?

General CASSIDY. [Deleted.]

[Whereupon, at 3:52 p.m., the subcommittee was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1989

THURSDAY, APRIL 14, 1988

U.S. SENATE,
SUBCOMMITTEE ON PROJECTION FORCES
AND REGIONAL DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

STATE AND PLANS FOR THE U.S. MARINE CORPS

The subcommittee met in open session, pursuant to notice, at 2:08 p.m., Senator Edward M. Kennedy (chairman) presiding.

Present: Senators Kennedy, Cohen, Symms and McCain.

Staff present: Arnold L. Punaro, staff director; Romie L. Brownlee, deputy staff director for the minority; Kathryn E. Bognovitz, special assistant; Norman G. Mosher, Mark B. Robinson, and Daniel J. Wildfong, professional staff members; Lori M. Jackson and Pamela G. Powell, staff assistants.

Also present: William J. Lynn, assistant to Senator Kennedy; Jeffrey B. Subko, assistant to Senator Exon; Charles C. Smith, assistant to Senator Dixon; Milton D. Beach, assistant to Senator Glenn; Terrence Lynch, assistant to Senator Shelby; Dale F. Gerry, assistant to Senator Cohen; and Anthony H. Cordesman, assistant to Senator McCain.

OPENING STATEMENT OF SENATOR EDWARD M. KENNEDY, CHAIRMAN

Senator KENNEDY. We will come to order. Before proceeding with General Gray's testimony, we want to extend a very warm welcome to the new brigadier generals. We will include all of their names and those of their wives in the record.

Brigadier General Selectees

Name	Nickname	Birthday	Wife's name/Nickname
Brandtner	Marty	3 July	Sandy
Rich	Mike	12 December	Queta
Tiebout	Bob	11 August	Lil
Ehlert	Norm	12 December	Denise
Hearney	Rich	27 November	Maggie
Sheehan	Jack	23 August	Peg
Arick	John	19 January	Terry
Livingston	Jim	12 January	Sara
Christmas	Ron	11 March	Sherry

Brigadier General Selectees—Continued

Name	Nickname	Birthday	Wife's name/Nickname
Blot	Harry	10 October	Marie
Myatt	Mike	27 December	Jill
McKay	Jerry	13 January	LaVonne

We are delighted to have you come here today, and we are going to make General Gray look good at these hearings. [Laughter.]

We want to congratulate all of you. We are mindful of the extraordinary achievement. A total of 434 officers were considered for the promotion, 218 above the zone, 100 in the zone, 116 below, in present duty assignments selections.

So obviously, based on the merits, this is an extraordinary personal achievement, and it is tremendous. I think we are well served in our country with that kind of quality people leading our young marines. You are very warmly welcomed here.

We want to welcome General Gray back to the committee. I want to say what a personal pleasure it is to have the opportunity to have General Gray before the Projection Force Subcommittee. General Gray has been enormously forthcoming, not only in these committee hearings, but also as well in taking time to visit with us and to bring us up to date about the capacity and the requirements for the Marines.

He has demonstrated himself to be a very effective and keen spokesman, not only for the U.S. Marine Corps, but for national security. So we are delighted to welcome him back to this committee and back to appearing before the full committee in effect. We thank you very much for your appearance.

General Gray has been at the helm of the Corps for a little more than 10 months now. He has already made a strong impact. It is appropriate to discuss the state of the Corps and his plans for the future. The Corps is facing several contentious procurement issues which he must address in the budget. We look forward to hearing General Gray's views.

I am pleased to welcome the new brigadier generals and their families also. Chairman Nunn had hoped to be here today, but he is presiding at the committee's final hearing on the INF Treaty this afternoon.

Today's hearing will give us a picture of a Marine Corps that is healthy and ready, but that faces serious challenges in the years ahead to preserve the capability of its force structure in terms of size and technology.

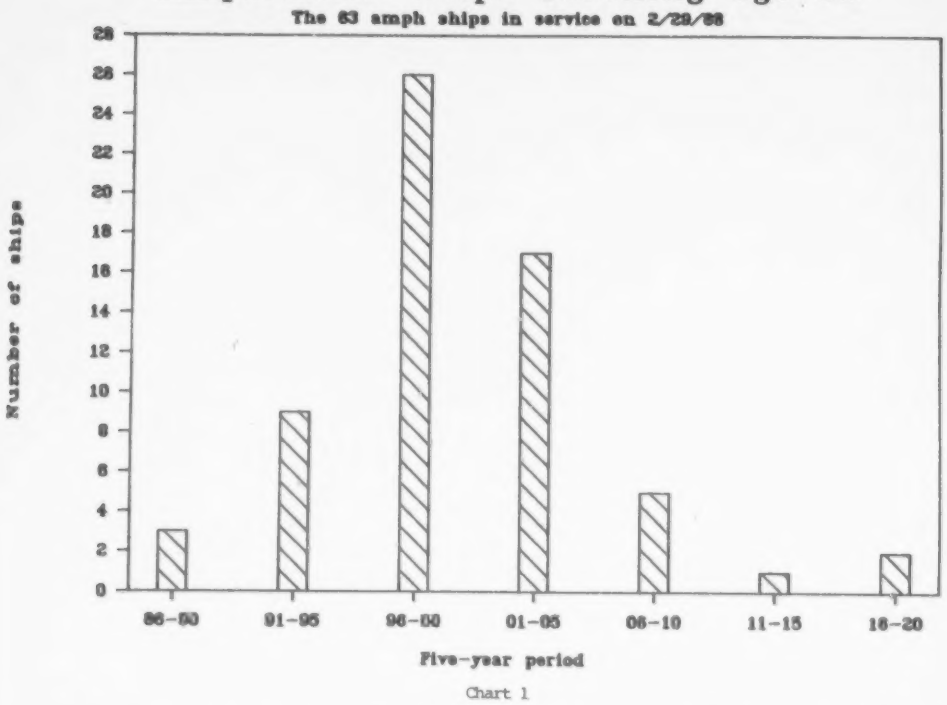

Chart 1

As the chart shows [Chart 1], 52 of the 63 amphibious ships that we have today must be replaced between 1991 and 2005. This is an average of almost four ships a year, starting with the 1990 budget. The heaviest part of the ship replacement program is likely to occur when we are trying to fund the eight aircraft carriers which will be up for retirement at that period.

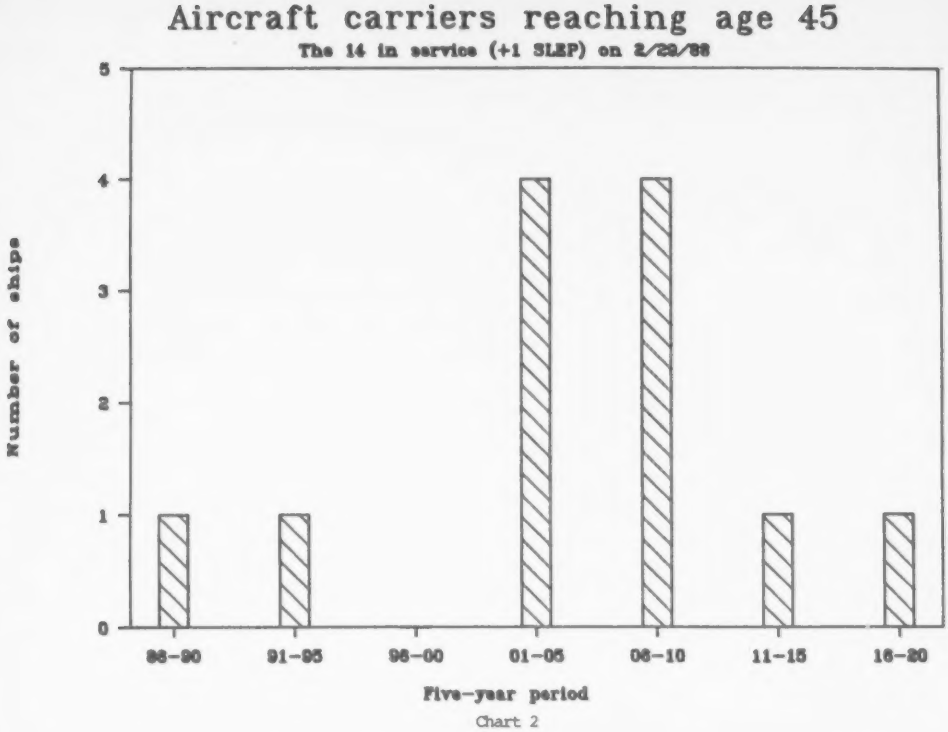

Chart 2

This next chart [Chart 2] shows that between the year 2001 and 2010 eight aircraft carriers must be replaced. This is at a time when we are going to have heavy pressure in terms of the replacement of amphibious ships on which the marines depend.

The cruiser-destroyer picture is also unsatisfactory. At the current rate, there is no way we can meet the near term requirement. We are 20 percent short of that goal now. The problem will be worse in the future, and these ships will have to compete for dollars with carriers and amphibious ships.

These replacement requirements are a major cause for concern now. How do we correct the cruiser-destroyer shortfall and check the decline of these important ships? How do we preserve the unique amphibious capability developed by the Marine Corps? Some feel that if amphibious ship replacement loses the battle for the shipbuilding dollars to aircraft carrier replacement, the Marine Corps will become another Army.

How does our inability to buy enough combat aircraft for the Navy and Marine Corps affect our future forces? These questions must be resolved in the context of our commitments and our capabilities versus those of the Soviet Union.

An important measure of our military capability is the quality of the force, and our greatest asset is the quality of our personnel and our demonstrated capability to introduce new technology. The same approach should lead to new and more flexible ways to cover commitments. The Marine Corps has always been a leader in developing and adapting technology to create new capabilities. The land-

ing craft air cushion (LCAC) increases the range and breadth of our amphibious forces. Without the Marine Corps, the United States would not have any vertical/short takeoff and landing aircraft capability. Improvements here have been very impressive in the past 15 years, and the supersonic version is not far off. When that occurs, combat aviation will be transformed again, and the Marine Corps will be the service that had the vision and the tenacity to make it happen.

Likewise, the V–22 tilt rotor technology could change the terms of war-fighting and transform the way aviation works for us. State of the art technology is one of the marines' greatest advantages. It goes hand in hand with the Corps' well-deserved reputation for superbly trained and battle-ready personnel. This committee intends to do what it takes to preserve and enhance those two outstanding capabilities of the Corps.

Senator Symms, do you have any statement?

Senator SYMMS. No, thank you, Mr. Chairman. I just want to welcome the General and all of his new selectees who are here today and their wives also. I look forward to hearing General Gray.

I might just say that he has been a breath of fresh air in this city since he arrived here, and I think that that is what we all need to hear, straight talk from our military, so that we get the kind of advice that we need. And I appreciate him very much.

Senator KENNEDY. Thank you.

General Gray.

STATEMENT OF GEN. ALFRED M. GRAY, U.S. MARINE CORPS, COMMANDANT

General GRAY. Thank you very much, Senator. Again, it is a privilege to have the chance for your Marine Corps to appear before this committee.

We have prepared a brief statement which outlines where we believe we are and where we must go, and which addresses in general terms the amphibious shipping block obsolescence challenge that we face, which you outlined in your comments earlier and which also addresses certain of our critical requirements that we feel must be met.

I will not go through all of that——

Senator KENNEDY. Excuse me. Let me interrupt if I could.

Senator Symms, if there are just a few of us here, as he runs through the testimony perhaps we could interrupt.

AMPHIBIOUS SHIPS

Just on this item, you mention in your testimony on the second or the third page, the Department of the Navy long-term amphibious lift requirements: to extend the life of the LPH's by 2 years, to deliver the first six LHD's by 1998, an additional ship every other year until 10 are in commission in the year 2006, to deliver the first nine LSD's by the year 2000 and an additional ship each year until 12 are commissioned, and about 20 LX's a new amphibious class ship to replace the LKA, LST, and LPD, would be delivered between 2001 and 2008. That is a new ship.

That is three or four amphibious ships per year. We have only built 12 amphibious ships in the last 8 years, from 1982 to 1989.

But, in your testimony, to replace obsolescent ships, you have us building three or four ships per year. The question is whether we are going to be able to get those kinds of resources to be able to do that and where this priority is going to be placed in terms of other priorities.

I do not know whether you want to deal with that issue. But it is a matter of considerable concern, certainly to me and I would think to the committee, how we are going to try to cope with that, given a realistic assessment about where our resources are.

General GRAY. I would like to comment on that. First, we face some very, very challenging times with respect to defense resources; clearly that has been a continuous theme throughout the hearing with respect to the fiscal 1989 amended budget submission.

It is my view that it is of vital importance that we in the Congress, in the executive branch, and in the Department of Defense take a very careful and perhaps new look at where we are with respect to military power and how we plan to use military power in concert with the other elements of national power, be it political, diplomatic, economic, or in some cases technological.

I say that because it appears to me that we can no longer continue to have all of the services organized, trained, equipped, and planning for all-out war with the Soviet Union and the Warsaw Pact.

SOVIET STRATEGIC NUCLEAR THREAT

It is true that that is our number one conventional threat. The most awesome threat is the Soviet strategic nuclear threat. We have continued to recommend and to take whatever steps are necessary to keep a strong strategic nuclear capability.

But the Soviet Warsaw Pact threat to NATO continues, and it is a very formidable one. Likewise, we are threatened in another of what I call the national security static defensive requirements, this one is in northeast Asia, specifically Korea.

We also have a third threat that we are facing right now. There have been some 300 conflicts since World War II in Thirld World regions wherein are many of the vital resources and minerals that are vital if we are going to survive as a nation, and vital to our allies and the free world.

We have not had a war in Europe, thankfully, and that is because of the NATO alliance. We have remained strong, albeit we have had some ups and downs, but basically the alliance has worked.

In order to continue to deter war in that region as well as in Korea, we have to have balanced military power. I would see our foremost requirements as a strong U.S. Air Force, an allied air force, and a strong, tough, well-equipped, well-manned land army.

That is what in my judgment the Air Force and Army should be primarily aimed for. We also have to have balanced naval power, because the sea lines of communications are crucial to supporting NATO and they are crucial to supporting any endeavors in the Pacific.

And this balanced, as we say in NATO parlance, striking fleet has to be strong, air, surface, and subsurface. And it has to have a powerful, flexible amphibious warfare capability as well, or we will not be able to use the sea lines of communications and therefore we will not be able to sustain battle in Europe or in Korea or both.

The reason is because, if you want to go anywhere, to include Thirld World areas, and you want to stay long enough to get a victory or a successful or proper political decision, you have got to come from the sea.

Airlift is very important and we strongly support that, but the primary focus in sustaining battle has to come from the sea.

In the Indochina conflict, you could look at the Danang harbor any morning during the height of the conflict and you would see 45 to 55 merchantmen there delivering the war materiel that sustain men in battle.

And within the context of this balanced fleet and the carrier battle groups and the escorts and the amphibious forces that are needed, if we are going to win the battle in Europe we are going to have to win the battle in the North Atlantic to protect those sea lines of communication, because even though we can rapidly reinforce Europe with airlift, or Korea for that matter, the sustainment after the initial prepositioned stockage is used up must come from the sea, as well as additional military power.

Now, to do this you have to have a lot of maritime air surveillance, a lot more than you are going to get from 10, 15, or 28 carrier battle groups for that matter, land-based maritime air surveillance. Places like Iceland, the Azores, and so on become crucial.

If you have these bases, you must protect them. And if you do not have them, you make them, which is really what World War II in the Pacific was all about.

Additionally, you have got to be able to control the choke points, the Greenland-United Kingdom-Iceland gap if we are talking the North Atlantic and similar kinds of geography in the Pacific, the Straits of Molucca, the Straits of Hormuz.

The Persian Gulf gives us a good example of the need to be able to control the land on either side of the narrow choke points. That is what makes keeping the international waters open in the Persian Gulf such a difficult military challenge, because we do not, as we know, control the land on the Iranian side, nor do we have much access on the gulf coast region, as the Senator well knows from his visit over the holidays.

So amphibious forces play a role there. That is the reason for maintaining your Marine Corps as the Nation's force-in-readiness.

It is generally agreed, again in the NATO scenario, that if you want to win the battle in the North Atlantic, your best place to win it is in the north Norwegian Sea, and the reason is because if we allow the Soviet submarines to go into the open Atlantic on this side of the GI/UK Gap we are going to have tough hunting and indeed may not be able to do it.

When we look at the north Norwegian Sea and that maritime region, all of a sudden it all falls into place, because you cannot win a naval war in the north Norwegian Sea if you are going to be supported only from logistics installations like the Clyde River complex in England.

You need advanced naval bases in central and north Norway, and now the Norway preposition capability that we have begins to tie in as well to the maritime campaign. Here we see the Marine air-ground logistics team as the land-based spearhead of the balanced maritime striking fleet.

When you control the central and north regions of Norway and the area between Norway and Denmark, the Skagerrak and the Kattegatt, you deny to the Soviets fleets going to sea, or if they are at sea they cannot get back to be maintained and supplied.

So the point I want to make here is there is a vital linkage that has been established through training exercises, through war games, through seminars, study periods, and related type activity, which clearly points out the vital part of amphibious warfare to the main global war kind of scenario, what I call the category A conflict.

We have a similar scenario in the southern region and, as we recall from World War II, if we are going to fight in central Europe or in the north or both, somewhere there must be an economy of force. And as we did in World War II, we conducted raids. The United Kingdom forces and other allied forces did raids around the Mediterranean, along North Africa, the littoral, the fertile crescent, all of that.

We have to have that capability as well.

Additionally, Marine Expeditionary Forces play a vital role in the southern region, because we point like a dagger at what Winston Churchill used to call the soft underbelly of the Axis: the Balkans, the Crimea, and the like.

So in the southern region we play a powerful role.

In the northern region, when we turn a map around, NATO stretches from northern Denmark to the north cape of Norway, and we point like a dagger once again across the Soviet lines of communications that must be established and protected on their right flank, going through the Benelux countries as the Soviets strive to get to the French ports.

All of this is reason enough to have Marine Expeditionary Forces. That is why since 1947 Marine Expeditionary Forces, two of them, the First Marine Expeditionary Forces and the Second Marine Expeditionary Force, one in California and one on the east coast, have been the strategic reserve for NATO.

More recently, a MEF has been further defined to be the regional reserve in the north and in the south.

We have never lost sight of our purpose despite constrained funding, particularly in shipbuilding and aircraft procurement. Our entire blue, or naval part, of our budget programming today has been constrained.

There are not enough amphibious ships. There are not enough tactical aircraft. There are not enough helicopters to truly sustain us for a long period of time.

We have taken what we could get and we have made the very best out of it that we could.

I personally do not believe we are going to have an all-out war with the Soviet Union and the Warsaw Pact, nor do I believe we are going to have a war in Korea.

I do believe in a way we are at war today in the Third World regions, and I believe that they are the most likely conflicts for the rest of this decade and the next and as we steam, if you will, into the next century.

So it is within that context that your Marine Corps has taken a very hard look at where we are and where we believe we must go. We believe that this same balanced naval power of sailors and marines, to include amphibious capability, this same required force that is needed to protect the sea lines of communications, should be the service of choice in the mid to low-intensity conflict regions around the globe that we face in the future.

It does not mean that we do not support air capability or Army capability or special operations forces. What it does mean is that in the sea services you have this marvelously flexible force of aggregate usefulness that, through air, land, and sea maneuver, is in being today.

The Marine Corps has a tradition and a heritage of conducting operations in the Third World, and I submit that is important when we look at this and a capability to go wherever the national command authority desires and do what must be done. And again, it is in being today.

When I see that ongoing efforts to reduce the Marine Corps, even just under 3,000 people, 2,900 to be exact, as our slice of the force structure cut, I see that as a cut of a reinforced regiment of marines that are organized, trained, and equipped to go to war tonight, or to provide stability or security or nation-building or whatever.

Now, mechanically we reduce strength by reducing recruiting, early discharges, and so forth. But we should not get that mixed up with what things are going to look like this time next year.

The Marine Corps is going to be reduced by three infantry battalions that could, again, deploy today to do whatever must be done. It would appear to me that it is time the Congress and others began to look at these roles and how we organize and structure our forces in peacetime for our global commitments. Your marines have a role in the NATO strategy and in the Korean strategy. We are the only expeditionary force in the world, the only force in the world on either side of the iron curtain, that can go to war tonight without mobilizing a man.

You have got a national maritime expeditionary force in readiness today which, and if we continue to get the support of the Congress and get the programs that we have asked for, will be fully prepared today for tomorrow's battle and will be fully prepared for tomorrow's battle as we enter the next century.

That is kind of a long introduction, but what I want to say here is that shipbuilding plan that we alluded to in our statement is the way to eliminate the block obsolescence problem.

And it is a bottom line plan. It is a hard operational requirement, below which I cannot in good conscience support. And therefore, we would ask the Congress and the people to make sure, for the good of the Nation, that that program is kept intact and that we meet those goals.

I would put that program and these concepts up against anybody's concepts or ideas in terms of economy. That is another way

of saying that we do not think anybody can do it any cheaper than we can or any better than we can.

Now, you have to have flexibility. You have to have capabilities to move quickly. But it is not, most of the time, how quickly you get somewhere that is, deploy, it is how quickly you can employ your forces for combat.

Rapid deployment forces cannot do anything until they are sustained sufficiently to employ. We have, for example, around the globe today, doubled the capability to project power to each ocean through maritime prepositioned forces.

We have the equipment and the supplies to sustain a Marine Expeditionary Brigade of almost 17,000 people, a complete package of air, land, sea, unity of command. It takes 241 aircraft to move the men to that point of tension or that area where we can offload either in a port or at sea.

That is half the number of aircraft needed to move a 10,000 man light infantry division. And when you get done doing that, we have 30 days of combat power instead of three.

So from my view, when we employ airborne forces or light infantry divisions and the like, it would be very dangerous to employ them unilaterally, without sea power and maritime capability to provide the sustained support.

Thank, you, Mr. Chairman.

[The prepared statement of General Gray follows:]

STATEMENT OF

GENERAL A. M. GRAY

UNITED STATES MARINE CORPS

COMMANDANT OF THE MARINE CORPS

Mr. Chairman, Members of the Committee,

You asked me to comment on my plans for the future of the Marine Corps and to give special attention to the problem of block obsolescence of amphibious ships. You also expressed an interest in my views on Marine aviation to include our stated force goal for the AV-8B Harrier. In this statement, I am pleased to respond to those focused interests and will gladly elaborate on them, and on any other topics, during my personal testimony before you.

Before giving a brief overview of my plans for your Corps, I want to assure you that the Marine Corps is ready to go to war now--today. We are in good shape. We are well trained. We don't need to mobilize. The condition we enjoy today is the result of your investment in us over the past seven years. My plans for the Corps are to protect that investment, build upon it, and make us better. Let me review some things we are doing to that end.

- We have begun our Basic Warrior Training program which will give every Marine additional combat training to enhance aggregate warfighting skills.

- We have formed the Combat Development Command at Quantico, Virginia, that will more effectively link together service planning, doctrine development, and training and professional education to include joint/combined

operations.

- We have formed the Research, Development, and Acquisition Command, also at Quantico. It will receive the weapons and equipment requirements defined by the Combat Development Command, and through streamlined acquisition procedures, get them quickly into the hands of our Marines.

- We are realigning our forces to increase the manning in the infantry battalions and other selected ground combat units. Manning these units at or near 100 per cent will add the stability and cohesion necessary for effective training of our squads, platoons and companies. The manpower to do this is coming out of our aviation and service support units.

- We will move some general support artillery and some heavy combat service support units to the reserves. This will also help us man the lighter, fighting maneuver units while preserving our access to the heavier support units upon mobilization.

- We have recognized the natural alliance between communications and intelligence and will form a surveillance, reconnaissance and intelligence group (SRI) in each Marine Expeditionay Force (MEF) to better integrate and exploit the capabilities of the Marines and equipment dedicated to these functions.

These initiatives, among others, will improve your Corps' ability to respond, without mobilization, to the most likely conflicts: low- and mid-intensity warfare. They also protect

our capacity to join the fight in a higher-intensity general war which would require some level of mobilization. These changes are zero-sum from a force structure perspective (i.e., no growth).

Before responding to your more specific interests, I want to make clear that not all the goals I envision will be attained on my watch. The target in our sight picture is the Marine Corps at the turn of the century. We think these plans will take us where we should be ten years from now. They are measured and deliberate, however, so that as we change, we will not limit our ability to respond. We are the nation's dedicated expeditionary force, ready to go on moment's notice, by any means, to any place on the globe where we are needed. One of those means, and the most important one to us, is the Navy's amphibious ships.

Amphibious shipping is this country's primary means of projecting power that can be sustained. Amphibious ships give us the means of forcible entry. We do not, today, have enough of them. The requirement is to have enough to lift two MEFs--one in the Atlantic, and one in the Pacific. The Navy and Marine Corps realize that the two-MEF lift goal, because of fiscal constraints, cannot be an immediate objective. So, as a stepping stone to that end, and in accord with the defense guidance, we have set an interim goal of enough ships to lift the assault echelons of a MEF and a MEB by the middle of the next decade. At present, we can lift only one MEF.

Block obsolescence becomes a problem in 1996 when we begin to retire the LPH-class ships. Forty-seven of the 63 amphibious ships in service today will reach the end of their 35-year service lives between 2000 and 2008. The capacity of these ships represents about 50 per cent of the troop lift, sixty per cent of

the vehicle square lift, 40 per cent of the cargo cube lift, 25 per cent of the vertical takeoff and landing (VTOL) aircraft lift, and 30 per cent of the landing craft, air cushion (LCAC) lift required to support the MEF and MEB requirement.

The Department of the Navy Long Term Amphibious Lift Requirement and Optimum Ship Mix Study Validation of 1987 has a plan to respond to this problem. It would extend the life of three LPHs by two years; deliver the first six LHDs by 1998 and an additional ship every other year until ten are in commission in 2006; and deliver the first nine LSD-41s (Cargo Variant) by 2000 with an additional ship each year until twelve are in commission in 2003. Also, about 20 LXs--a new amphibious-class ship to replace the LKA, LST, and LPD--would be delivered between 2001 and 2008. The design and capabilities of the LX are under development. The lead ship in this new class should be funded in FY 96.

The lift study I mentioned above does not only provide a plan for meeting our lift requirements. It also restates specifically what those requirements are. We view the requirement in each category--troops, square, cube, deck spots--as constraints on the design of our forces. Before buying new equipment, we analyze its affect on the amphibious lift "fingerprint." If it will add to the aggregate lift requirement, we either modify it, don't buy it, or decide what current equipment will provide the offset. In other words, we are aiming at a fixed target.

Marine Corps aviation is that component of the Marine Air Ground Task Force (MAGTF) that makes a MAGTF a unique military organization. It compensates for the ground combat power we must trade off in order to be light and mobile. And it enhances our flexibility through assault support.

Key to retaining--and greatly improving--our capabilities is the MV-22 tilt-rotor aircraft. It will replace the CH-46 helicopter which is older than most of the Marines and Sailors it must carry into combat and many of the pilots who must fly them into a hostile environment. The MV-22, with its greater speed and range, much-improved survivability, and night navigation system, will provide the aviation component of our developing over-the-horizon amphibious assault capability.

Air assaults need heavy lift support. The CH-53E helicopter has the power and range to lift our howitzers, light armored vehicles and other heavy supporting weapons into the objective area with, or immediately behind, our assaulting infantry. Our mid-term goal is to have six CH-53E squadrons which means we must continue to buy these helicopters beyond FY 89, and we have programmed accordingly.

As mentioned above, light expeditionary forces--your Marines--need close air support to supplement ground fire power. Hence, our aircraft must be configured for expeditionary service. The AV-8B is the only fixed-wing aircraft that can deploy with Marines aboard amphibious ships. It can also deploy anywhere in the world and be ready to fight within hours. It can operate ashore independent of fixed runways and unencumbered by complex command and control systems. In 1990, the AV-8B night attack variant will be added to the fleet. Recently, this AV-8B variant provided night close air support, without illumination, from a North Carolina road. No other aircraft in the world can do that. Because it can operate from austere landing areas close to supported troops, it can generate twice as many sorties per day as conventional aircraft. And, it doesn't cost as much.

Our goal is to have eight light attack squadrons, each with twenty AV-8Bs. This goal, in fact, does not meet our

requirement. It is a compromise which recognizes current and anticipated fiscal and manpower constraints and accepts a level of risk higher than we would like. The AV-8B program supported in the President's Budget allows us to attain this constrained goal. Without the FY 89 procurement levels, we would be able to equip only six squadrons and would probably have to cancel the night attack program. Also, without further procurement, our six squadrons would erode, through aircraft attrition, to about four by the end of the 1990s.

I have limited my response to the specific topics you asked about and have tried to be brief, but complete. I would like to add one short postscript on the general principles guiding your Marine Corps during these leaner days. We will tell you up front what we need and why we need it. We will then take what you give us, combine it with what we have, make the most possible out of it, and do whatever the nation asks us to do and more.

MARINE CORPS AVIATION

Senator KENNEDY. General, you have given us the full analysis in terms of global strategy and commented particularly on amphibious ships in your statement.

The other issue relates to the Marine Corps aviation. Maybe you would like to just summarize that briefly and then we will go to some questions.

General GRAY. Clearly we have to have a balanced close air support capability. Again, we have that in being today, and there are some shortfalls, as you know from our budget requests.

AV-8B

We have in my judgment the very best close air support aircraft in the world in the AV-8B. It can fly twice as many sorties as any other fighter attack aircraft in the world, and it is the only aircraft in the world that can fly from deck spots on ships.

It can fly from dirt roads, and it can fly from fields in combat. In fact, just last week an AV-8B flew off a blacktop road in North Carolina and ran an illumination mission and then an air strike in support of troops. No other aircraft in the world can do that.

As you will recall from my earlier testimony, last year when we were operating in Honduras we flew three times the number of sor-

ties with six aircraft, six AV-8B's from ships, as the Air Force was able to do with F-16 type capability or A-10 type capability.

The AV-8B meets our needs. In addition, we have had a long-standing requirement for more than the eight AV-8B squadrons we have requested through the budget.

When you look at our global commitments—and the Congress has told us, take your strategy, look at your requirements, and tie it into the needs of the unified commanders—we have a requirement for 13 AV-8B squadrons to support the Marine Expeditionary Forces.

We have the maritime prepositioned brigades or forces and the Norway prepositioned capability. Now, because we have lived in a constrained envelope for many, many years, we have planned for eight AV-8B squadrons, a total of 328 aircraft.

Last year, our request was reduced from 32 to 24, and 24 is the number in the budget this year, in the amended budget submission. But we need as a very rock bottom minimum the aircraft that we have called for to meet our eight squadron requirement for peacetime.

There is a school of thought that says, you do not need all of that aircraft for eight squadrons. I do not know where that comes from, except that people begin to look at deck spots on amphibious ships. You do not fight wars with deck spots.

You fight wars with men and materiel.

The AV-8B's can operate off amphibious ships and can fly anywhere in the world, Pacific or Atlantic, and be employed.

On a routine basis, we fly 30 to 40 AV-8B's to northern Europe. In 54 hours from the time they leave Cherry Point, they are operating in north Norway.

Senator COHEN. General, if that is the case, why is the Navy so unsympathetic to your cause?

General GRAY. I think the Navy has very, very difficult fiscal challenges, Senator, as you well know. And in December, when we went back and looked at the budget decrement, we had to find $12.6 billion as part of the transition from the initial 1989 submission to the amended budget submission.

And so we tried to come up with a balanced program, and the AV-8B was in that program and it was to be supported. Now when we look at the program that is being submitted right now only to the Department of Defense for 1990, we see yet another danger point with respect to AV-8B, and I am aware that that information is here on the Hill.

It takes so many aircraft to maintain and sustain carrier decks and to meet the overall requirements of carrier battle groups. You just cannot get there from here with the money that has been allocated through the process within the Department of Defense.

Senator COHEN. If I could just interrupt, General. And I apologize to our chairman.

Senator KENNEDY. Go ahead.

Senator COHEN. Number one, I commend you for bringing the flag officers and their families. It is a great act of courage to expose them to this process, second only to your appearance on 60 Minutes, a seminal point, I think, in courage as far as you are concerned.

But the fact of the matter is, between 1981 when the Reagan administration took over right up to the present day, it has not been the Department of Defense that has promoted the AV-8B. It has been this U.S. Senate and House.

And there has been plenty of money over the years for shipbuilding and aircraft and other things. This particular weapons system seems to get scrubbed each and every year. And while this year we are looking at a multi-year procurement, next year the Navy intends to terminate the program.

So it is not just a question of restrained resources. It has to be something within the Department itself. You have hinted at it, namely that you need some of those aircraft in order to justify the ships, and maybe you do not need the AV-8B to justify the production and procurement of more ships.

But I think it has to be deeper than that. You have made out a very good case and you have support from this committee for the AV-8B. But you have not been getting it, and the Marine Crops has not been getting it for years now, within the Department of the Navy.

I guess the question is, why not?

General GRAY. Well, I have not really been here long enough in this capacity to answer why the Navy does not apparently support the AV-8B and that type of thing. I have been out in the field, where the war-fighting admirals cannot get enough of the AV-8B.

So it is a little difficult for me to understand. I guess I should just say I do not know. But I can say this. I do not have any intention of losing the AV-8B program in the Pentagon this year, and I do not care what the Navy puts in their budget.

And I intend for the first time to see a supported program come over here that you can say, well, finally after 8 and 9 years of congressional leadership and congressional efforts here, the Department of Defense is now on board.

Senator KENNEDY. While we are talking about it, just the air aspect of the Marines, we see on the Osprey the Army has dropped out, the Air Force slashed its funding, and evidently the Navy has abandoned plans for the ASW version of the Osprey, leaving it only a marginal participant.

Can the Marine Corps handle this program on its own? We are down to a purchase of 602 instead of 1,213 planes. With a smaller buy, what happens to the estimated $17 million unit cost?

General GRAY. Well, obviously it is going to require the profile that we see in the 1989 budget is supportable, because we have the necessary research and development money, and we have planned this.

Again, we had to come up with a balanced program in December to meet the budget summit dollar level. But within that context, it was very carefully crafted so that it is a good, viable program from the operational standpoint, as well as from the business strategy.

The problem again, as you know, that we face is that an identical profile has been tentatively submitted to the Pentagon, slipping it one more year. That is not good.

Senator SYMMS. Well, General, I have been told it is going to cost a million dollars a bird more because the Army dropped out. Is that roughly accurate, or do you know?

General GRAY. I do not believe that is accurate at all, and I do not think that anybody can say that with any degree of certainty whatsoever.

We have already made an investment. We have a program that not only supports Marine requirements, but is going to be the only logical special operations force airplane in the future.

We have to look, not just at unit costs up front, but at costs over time; when we look at survivability, we look at the mission capability, the envelope, the amount of flexibility that we get from this system.

We have only recently seen the first document that indicates that the Army is not going to stay with this program. We do not know how all of this is going to come out with respect to the 1990 Department of Defense submission.

So my request would be to stand firm and please support this 1989 program that we have; if we do not or are unable to provide a program in the 1990 submission that can compete with the other requirements and capabilities, then you will have to take other kinds of action.

But the plan that is before you now is, in my judgment, very, very, very sound. What will happen, of course, if we have to delay it further is you will see the need to renegotiate contracts, you will see the need to take the NTE clauses, and the like, the contractor clauses, and they no longer become applicable.

And so you have really in my judgment a whole new ballgame. And quite candidly, the profile that the Navy has submitted to the Pentagon in my judgment is one that is going to kill the program.

And again, as in the case of the AV-8B, your Commandant does not intend to let that happen, in the Pentagon or anywhere else.

TECHNOLOGY BREAKTHROUGH

Senator KENNEDY. One of the points you have made at other times involves the need to support areas where we get breakthroughs in technology. This certainly seems to me to be a place where you have had a very significant breakthrough in terms of technology. It just seems to me to be a very strong case that you have made before the committee.

General GRAY. If I may, sir, I would like to have the question asked from time to time of, why are not other people interested in this? Because helicopters, even with the new British blade, are only going to get a little more capability out of the helicopter technology.

And here you have a whole new regime that can take you into the next century, the way you should go.

Senator KENNEDY. I think you make a strong case.

We are going to have to recess for the vote. We will reconvene in about 4 or 5 minutes. We will stand in recess for about 5 minutes.

[Recess.]

FIREFIGHT IN PANAMA

Senator KENNEDY. We will come back to order, please.

General, I was wondering if you might be able to give us some update on the newspaper stories this morning which talked about a

firefight in Panama. Is there something you might be able to tell the committee about that?

General GRAY. Just from my vantage point—and I should say that I have taken the position that we provide forces to the unified commander, and what he does with them and what he says about whatever perhaps incidents may have occurred, that should really be the primary testimony.

My understanding is that our Marine forces that were sent down there to augment security are being employed out in that fuel farm area there that I believe you are familiar with, and that out in that area there have been a number of incidents of intruders. There were some 50 or 60 of these people, not wearing any military insignia, but operative out in that area. It is not too uncommon to have some of that because of pilferage and that type of thing.

There have been the usual rumors, initially that your marines were firing at shadows. And as usual, when you trace that down, you find that some military person in the embassy who probably never heard a shot fired in anger made that assumption.

They tell me now, as you look out through the area, there are quite a few signals, if you will, that there were people out in the areas.

All of our marines have been interviewed about this. Several of our people have testified that they saw these intruders through their night vision devices. The principal witness, if you will, is the first sergeant of the company, who is a three-tour veteran of Vietnam and probably is not the type that would get overly excited.

The youngsters are highly motivated. They are well trained, well led. We have talked to the chief of staff of the Southern Command, my chief of staff has, and they are well pleased with the caliber of the troops.

So I think what we have seen here probably is a group of people who are doing some things down there that are military or paramilitary in nature against our forces, for whatever reason, and it would be my guess that are outside of the Panamanian Defense Force knowledge or organization.

I think anything more than that would be speculation, sir.

Senator KENNEDY. Your at least preliminary conclusion is that this is a unique incident, then? Or there is no evidence that you have that would indicate that it is a part of any kind of plan?

General GRAY. I think we have some people down there who are doing some things that are clearly part of a more grand design, which might be deception, it might be some psychological activity.

It might be some things that could be done to perhaps bring some discredit on the forces in terms of the primary reason they are there, the sole reason they are there, which is to protect our interests there, our security interests, our bases, our equipment, and to protect the people around the base.

Senator KENNEDY. Were there any casualties, do you know?

General GRAY. No, sir, none on either side that we can determine. There is some indication that there may have been some blood and bandages, but again I do not have any confirmation of that.

And as you know, we did have a marine killed there earlier. He died of wounds. Marines were on a patrol out in that area and one

marine got separated from the patrol. He triggered trip-wires and was wounded, and he died later in the hospital.

Senator KENNEDY. Okay. Let me, if I might, General, go into some other areas.

PERSONNEL

The first is the area of personnel. I know that you put a high priority on maintaining the highest quality people in the Marines. I am interested in your personnel programs. If you had additional funds for these programs, in what areas would you slot those additional funds? I am thinking of whether it is in housing allowances, an increase in permanent change of station allowances, increase in special pay such as for marine pilots. Where would you focus any additional funding for personnel?

General GRAY. When you look at our posture today, we do not have a pilot retention problem. So I worry a little about this, because I face the problem of marine A–6 pilots, for example, flying off carriers alongside of Navy pilots that are paid more in bonuses. So that is a consideration.

But fundamentally, with bonuses and that type of extra incentive, my understanding of the intent of the Congress is to provide those funds to help these critical areas, and we do not have a critical area.

For example, earlier this fall we had 756 Reserve officers apply for augmentation to the regulars. We could only take 122 because of the billets that we have, and over 80 of those were aviators that we turned down.

So our manpower posture in terms of the quality, the motivation, and the desire to stay—they are standing in line to stay at this juncture. That is not to say that we should ever get overconfident about this, because we face in the next decade a different demographic situation.

To me, if we were given additional funds in the manpower account, the very first thing that we should do in my judgment would be to restore the 2900 man cut. The rationale there is that we have restructured our Marine Corps now, we have completed the studies that I alluded to in the earlier testimony before the Senate Armed Services Committee, and we definitely want to go to a four rifle company structure.

This is the structure that we adopted after the Korean war, after careful analysis of what then would be the future conflicts. This was by far the best battle formation in Indochina.

It is an idea really that came from one of our later generals, but when he was a lieutenant colonel he was on duty in Stockholm in 1938 and 1939 and observed the Finnish-Russian War. The idea comes from the Finnish, as a matter of fact.

So we want to do that. We are going to bring on that fourth rifle company, and this would really give us the capability to flesh that out. And more importantly, we would restore our three infantry battalions.

That would be my first priority. We have protected for the most part our family housing in critical areas. We have protected our housing endeavors for the enlisted people.

We have suffered some in military construction with the emergency or expeditionary airfield in Twenty-nine Palms and some activities. But fundamentally, we have tried to protect the manpower-associated portion of the military construction effort.

We would also like to be plussed up somewhat in our operational maintenance account, because that is where training, your readiness, preparation really has to be sustained.

AV–8B PROCUREMENT

Senator KENNEDY. The Secretary of Defense forwarded to the Congress the justification package for entering a 3-year contract for the procurement of the AV–8B. Seventy-two would be purchased through fiscal year 1991, representing an 11.9 percent saving over the course of the annual buys of 24 aircraft for 3 years.

Would you comment on the reasoning for the multi-year request? Especially comment on where you will be with respect to your total force requirement when these 72 aircraft have been delivered.

General GRAY. The AV–8B is experiencing a more favorable attrition rate, if you will, than had been earlier predicted. In other words, we are not losing as many through the normal type of accidents.

The fundamental request from the 1988–1989 package was 32 aircraft. That was reduced to 24 in the amended budget submission as a fallback capability, and the multi-year package, of course, clearly averages out or, from the business strategy standpoint, at 27 aircraft. That is the minimum that we think is fiscally prudent and economically sound in terms of cost analysis.

The plan was to have this package and for us, during the program objective memorandum 90 preliminary to the fiscal 1990 budget submission, to analyze the attrition figures and analyze that total package, and then request the additional aircraft to bring us to a total of 328.

That was the plan, and that gives us then the eight squadrons, and that protects the eight-squadron force structure into the next century.

When you reduce that pie even down to 276 or down to a lower number, you are going to lose a squadron probably in 1994, and two more in 1996–1997 time frame. And so you are taking a dramatic cut in force structure in capability as you enter the next century.

The 328 has long been our fiscally constrained bottom line for AV–8B aircraft. And incidentally, we also run the great risk of not putting the additional radar capability in there and making it a true day-night capable system.

We have an opportunity here for what I consider to be a fairly reasonable amount of funding, to not only have the best close air support aircraft in the world, but have enough of them to do what has to be done and have them upgraded in such a fashion that they are even more flexible.

Senator KENNEDY. At this time we have four Senators here, so we will go back into our time limitations. I recognize Senator Cohen.

Senator COHEN. Thank you.

AH-1W

General Gray, the AH-1W line was funded last year, and yet there was a tremendous shortage of equipment support, support equipment for it. We had a number of aircraft that were deployed to the Persian Gulf, and yet you had to cannibalize some of the remaining aircraft here.

The bottom line I guess is that we have got to buy support equipment for the aircraft, and yet it is not requested in the budget at all.

General GRAY. Are we talking, sir—did you say A4 or do you mean the AH-1W, the Cobra helicopter?

Senator COHEN. The Cobra helicopter.

General GRAY. The AH-1W in my judgment is a very sound program and it is funded properly in terms of aircraft and support. What happened here, because again of constrained funding, we must buy over time and we must balance the support over time.

And we did not intend to have to deploy Cobra helicopters, Whiskey model helicopters, to the Persian Gulf. And we made a conscious decision to deploy them, knowing that we only had in the barn about 25 percent of the support capability that you alluded to.

That is another way of saying that we employed or deployed these aircraft before we really would have in the normal procurement balanced maintenance and support plan.

Senator COHEN. Well, you have no funds requested for support of them for fiscal 1989.

General GRAY. In the AH-1W package, the amended budget submission?

Senator COHEN. Yes. Do you want to fight that one out with OSD, too?

General GRAY. Well, we certainly will.

I thought that the profile covered all of that and was a buyout of the AH-1W. And then we were still looking at, we had the option open to look at the need for additional aircraft and maybe even a variant of that.

Let me see what we have here.

Senator COHEN. You can check that one for the record. I would rather go on, General.

General GRAY. You are right, we need $55 million more to do it the proper way. Well, that gives me something else to fuss about in the Pentagon. Thank you, sir.

AMMUNITION

Senator COHEN. I thought you would want a little more ammunition. And speaking of ammunition, we had some testimony yesterday, quite disturbing, perhaps a bit apocalyptic, but studies indicating that between 90 and 95 percent of our conventional forces have been rendered somewhat vulnerable by virtue of the Soviets' improvement in their armor/antiarmor capability.

Would you agree with that statement that we are at about 90 or 95 percent naked to thine enemies now?

General GRAY. I really cannot comment on that statement, or should not, because I believe that was the Army talking.

Senator COHEN. If the Army is vulnerable, then what?

General GRAY. They may be. But you see, we do not have any requirement, for example, to draw upon reserves to commit our forces initially into battle for the first 60 days, and so that reserve readiness equipment issue is not one that we have.

Second, we have a fairly good mix of armor/antiarmor capability today that we employ tactically, in depth and in various formations. That gives us a pretty good capability to shoot at enemy armor and at all echelons.

Senator COHEN. The Army said yesterday that the Soviets' advances in reactive armor have rendered for all practical purposes everything we have deployed ineffective.

General GRAY. For the Army. But as far as I am concerned——

Senator COHEN. Do you have equipment different from the Army, that is capable of penetrating Soviet armor?

General GRAY. We have equipment in the field today that is capable of penetrating Soviet armor.

Senator COHEN. That is not what the Army has indicated. They have indicated that they do not possess the type of rounds that would penetrate the reactive armor that the Soviets are currently deploying on their tanks.

General GRAY. There is a need for equipment, advanced equipment to defeat the emerging threat and the latest Soviet armor which is available or which is in certain organizations.

But as the Senator well knows, there is a broad mix of Soviet armor around the world, everything from the old T-54 tanks, the T-72 export models, and everything in between, even the T-80.

We have infantry weapons carried by ordinary infantrymen that can penetrate the older Soviet tanks, the T-54, T-62, and so on. We have the Dragon equipment in the field, to include the phase two product improvement endeavor, which can handle T-72's. And certainly the TOW 2 upgrade can as well.

DRAGON 3

Senator COHEN. Is the Marine Corps trying to get the Dragon 3?

General GRAY. The Marine Corps desperately wants the Dragon 3 as an interim program to bridge the gap, if you will, between now and the development of the medium anti-armor weapon system.

I should point out that in about another year or so we reach a crossover point where we will not have enough missiles to really have the capability we need if we are deployed.

The Dragon 3 program does a couple of things for us: one, it gives us additional ammunition so that our Dragon 2 capability is maintained; and then more importantly, it will give us the capability to defeat the T-80 plus-up.

Senator COHEN. My time is up. Thank you, General.

General GRAY. With, incidentally, no more men. You see, the issue between Dragon and MILAN, for example, the reason the Army and the Marine Corps have not recommended adopting MILAN is because it takes twice as many people.

Senator COHEN. The only other question I have is, how do you explain to Senator McCain why we need the AV-8B aircraft to replace those expensive, big deck ships we have floating around out

there in the Indian Ocean? But I will let you refer to him on that one.

Senator KENNEDY. Thank you.

Senator Symms.

MARINE CORPS IN GOOD SHAPE

Senator SYMMS. Thank you very much, Mr. Chairman.

General, you may have talked about this when I was out of the room, and if you have I can get it from the record. But you say in your statement that the Marine Corps is, you said, ready to go to war now today; we are in good shape, we are well trained; we do not need to mobilize.

How about the Fourth Division and the Fourth Air Wing?

General GRAY. The Fourth Marine Division, the Fourth Marine Aircraft Wing, the select Marine Corps reserve, along with the Fourth Service Support Group, their readiness and capability is in pretty good shape.

It is our intention to take that organization and integrate it further into the Active Fleet Marine Force, so that we take the final step toward true total force preparedness. What we want to do here is have three lean, mean, Active Marine Expeditionary Forces that can go immediately, even in the all-out global war conflict, in the heavy mode, if you will, by compositing and task organizing from those three active duty forces, and then through partial mobilization and mobilization flush them out with the heavier artillery, the additional armor, and those kinds of capabilities.

That is the direction in which we are moving. In order that our active forces are more aimed at the mid to low-intensity conflict arena, we will take some of the heavier artillery and other capability and shift it into the selected Marine Corps Reserve.

On the ground side, the selected Marine Corps Reserve is superbly well equipped. On the aviation side our plans include bringing in the F/A-18 aircraft. I certainly would like to get an AV-8B capability in the reserve as well.

And I would like to—if I could get some additional money, I would take those MV-22's the Army does not want and I would put them in there as well.

What we need are pilots, crews, and machines in the Reserves, so that we can flesh out and sustain over a period of time.

MARINE CORPS PILOT RETENTION RATE

Senator SYMMS. What is the retention rate of the Marine Corps aviators right now, for particularly the captains and majors who are the ones that are really ready to go out and fly?

General GRAY. They are standing in line to stay. Tragically, because of our limited boat spaces we are turning them down, and they are going out with the airlines and doing other things.

It is my intent to change this situation. I just do not know how the hell to do it right now, but I am homing in on it. Somehow, some way, we must take in too many regulars from the Naval Academy and the NROTC. When our young officers come from other paths to a commission and go to the field and serve 3, 4, 5 years, and who meet the test of time and are recommended for reg

ular commissions with enthusiasm by field commanders, and we are taking only a very small percentage—that is wrong. Your Commandant has got to change that.

I may need to come to you with some legislation here, because I do not know whether you could take somebody out of the Naval Academy, for example, and give him a Reserve commission. I do not know if you could do it in the naval ROTC.

I note that the Army Reserve officer training corps does provide commissions to the Guard and the Reserve. So we are looking at all of that.

MARINE CORPS BUDGET

Senator SYMMS. Now, the Marine Corps budget for fiscal year 1989 totals $1.2 billion, but there has been a decrease of $400 million, is that correct, from what you had originally asked for?

General GRAY. That is right, Senator.

Senator SYMMS. So in your statement that we are ready to go to war today, if we keep these kind of cuts will you be able to say that next year, or will there just be less of you ready to go to war?

General GRAY. That is what it is going to amount to. We are going to have to collapse down and structure accordingly. We are now in our third year of decline in terms of budget allocation. We have a long tradition of poverty in our Marine Corps.

So given all of that, it is very, very difficult. It is my view that in the next couple of years, even with the constrained submissions that we have made, we can remain very, very well prepared, because really we are in the best shape.

You have supported us well and we have spent our money wisely, and so we are fairly well modernized. We have no great gaping holes other than the critical areas that we have touched on, the MV-22 and the AV-8B. The MV-22 is crucial for the future for the over-the-horizon assault so that we can avoid precision guided munitions in the beachhead area.

What you see out there tonight and what will be out there 2 years from now tonight will still be very, very well prepared.

GREATEST SHORTFALL

Senator SYMMS. What do you think is the single greatest shortfall that this budget cutback is going to affect the Marine Corps with? Or is that a hard question to answer?

MV-22

General GRAY. It depends on how it comes down. For example, if we are unable to get the MV-22 program, one, we will not enter the next decade, the next century, with the kind of capability that your forces need.

Two, you will take the cost of the MV-22 program today and in my judgment add $4.8 billion to that cost to re-equip us with helicopters with 1970 technology and so on, because our helicopter fleet has aged.

Our CH-46 helicopter, which is our basic assault troop, transport, all but goes out of business. It crosses the margin here in the next 3 or 4 years. We have to replace this capability. So it boils

down to replacing it with yesterday's technology and idea or tomorrow's capability.

BIG CARRIERS

Senator SYMMS. General my time is up. I did want to ask you a question about the big carriers and the non-necessity for big carriers with AV-8B and the lack of enthusiasm the Navy has for it.

With your philosophy, you think the biggest threat facing this country is the low intensity war, if I understood your testimony right, and maybe now a huge confrontation in Europe, but a Third World type of war, and where it fits in—maybe Senator McCain will get to that. I think my time is up, so I cannot really ask you that question. But I would like to discuss that further.

That is a question. You kind of hinted around the edges that one of the problems is that you do not need a big carrier to fly an AV-8B off of. But you also talked about the fact that you think that the most likely kind of a war that we will fight may be one where we are called upon to deploy rapidly mobile forces to an area somewhere.

And it seems as though our tendency is to build high priced weapons that everyone is afraid to use, and then be a little bit too inflexible.

Would you want to comment on the general philosophy of that and how you view this and what we should be doing on this committee to try to fix that problem?

General GRAY. I think that the carrier battle groups and the related capability that goes with the balanced striking fleet is clearly required to maintain our deterrence against war with the Soviet Union and the Warsaw Pact. We have got to maintain that kind of requirement.

Now, these same carrier battle groups that train up with our four deployed amphibious forces and operate with them have enormous usefulness for the mid- and low-intensity conflict arena as well.

We must remember that if the bell rings tonight, we go with what we have tonight—doctrine, equipment and people. When you look at the mid- and low-intensity conflicts that we have had since the end of World War II, Senator, one sees that in almost every case carrier battle groups have had to be deployed.

It takes a long time to really think through appropriate comments along the lines of what you have brought out here. I certainly am a supporter of the carrier battle group concept for all of those reasons.

Senator SYMMS. Thank you, Mr. Chairman.

Senator KENNEDY. Thank you.

Senator McCain.

Senator MCCAIN. Thank you, Mr. Chairman.

I apologize for being late to this very important hearing. It was a matter of vital national security interest on the location of a professional baseball team in Phoenix, Arizona.

Senator KENNEDY. Oh, that is all right, as long as it is not the Red Sox. [Laughter.]

Senator MCCAIN. They would have to learn English. [Laughter.]

I would like to thank you, General, again for a very important appearance here. And at the outset, I would like to also congratulate you for the fine job you are doing.

I hear from all quarters about the enormous impact you have had on the morale and efficiency of the Marine Corps. And I was only concerned recently when I saw a flattering article about you in the Washington Post. But I do think you have done a fine job, and I hope that you will be able to continue with the kind of forthright testimony that we have gotten from you.

AV-8B

I am sorry that my friend Senator Cohen is not here now about the AV-8B and the carrier, although this debate does get a little tiresome for some of us. But he was a strong supporter of the AV-8B in 1979, I know for a certain fact, and continues his strong support.

I appreciated your response to my good friend Steve Symms. The AV-8B and the aircraft carrier are indeed not incompatible. In fact, I would suggest one of the reasons why Navy people should indeed be very supportive of the AV-8B is because there may come a time when we will acquire the technology, which will allow us to do away with the very heavy and cumbersome catapult and arresting gear, and then we will be able to reduce the size of the aircraft carriers.

But I think you will agree that the AV-8B is not yet at the state of the art where we could yet carry out its mission in the very high technology threat areas in which we expect them to be involved.

But I would like again for the record for you to state your commitment to the AV-8B, and are you concerned if it is indeed true that the Navy has dropped it from the fiscal year 1990 POM?

General GRAY. Yes, we are very concerned that that currently is the situation. And as you well know, that entire POM is under review now within the Department of Defense.

Senator MCCAIN. Let me state it differently. If it were dropped from the POM, would this be a matter of serious concern to the Marine Corps?

General GRAY. It is of great concern. The funding profile that exists now is of deep concern to the Marine Corps, because it in effect says that we will not achieve and maintain eight AV-8B squadrons, which is the bare-minimum, fiscally-constrained force, as opposed to the 13 squadrons we need. We will not be able to achieve and maintain an eight squadron AV-8B capability, which is again the minimum required to replace our A-4 community.

It means that we will end up with five and perhaps even four of these squadrons by the end of the next decade, and that is totally unacceptable to meet our close air support requirements of today and tomorrow. I would like to be able to say at the end of the game on the fiscal year 1989 budget that the Congress, particularly the Senate, has once again, therefore for 10 straight years, supported the AV-8B program.

If the Commandant is going to be able to get a better profile for the AV-8B in the 1990 budget submit, and if he is going to be able to get a better profile for the MV-22 in the 1990 submit, then you

must support the 1989 budget. Now, any sign of waiver is going to kill off the MV-22 program for all time and is going to put such a dent in the capability of the AV-8B that it is going to have to come under serious review for the outyears.

Senator McCAIN. Thank you, General.

MANPOWER CUTS

Perhaps for the record you could provide me with the impact of a cut of 2,900 men in your end strength that you are about to receive, and now you are able to cope with that? I think it is a very significant impact on you.

[The information follows:]

The reduction of 2,900 end-strength from our fiscal year 1989 programmed strength will require us to cadre three reinforced infantry battalions or reduce 11 percent of our infantry combat power. We will still be able to perform our assigned missions, but the degree of risk will increase.

In addition, we are enhancing the force structure and manning of the remaining infantry battalions, light armored vehicle battalions, and surveillance, reconnaissance, and intelligence units. We are transferring portions of heavy forces—such as artillery and air defense—to the reserves. The net result will be a total force—active and reserve—that remains fully capable. The active force structure will be lighter, better manned, and ready.

DRAGON 3

Senator McCAIN. It is my understanding that the House Armed Services Committee has funds to upgrade the Dragon 3.

General GRAY. Yes.

Senator McCAIN. I hope that this committee will also seriously consider it as a partial remedy to this armor/antiarmor problem. I might say that the testimony Senator Cohen referred to yesterday was very alarming, I think, to members of this committee and I think to the American people, or will be once they hear about it.

LOW INTENSITY CONFLICTS

Senator Symms talked about this business of a low intensity conflict. We have about a million experts on Panama that I have heard from personally as to how we should handle that situation. there.

And since you are one of the few who I think has the experience and the knowledge to address the issue, could you give us your views on how this country should be handling that situation, your personal views?

General GRAY. Well, the situation of course is one primarily of political and diplomatic concern, wherein, as I understand it, we would like very much to see the present leader of Panama step down because of all the well-known reasons, which I also believe are correct.

As we think about employing the various elements of national power, my main concern is at this juncture for the security and the protection of the American people and the facilities that are located in Panama.

To this extent, the unified commander, General Woerner, has moved to strengthen the security of his bases and of his people. I do not personally see this as a requirement for a military confron-

tation, either with Panamanian Defense Forces or with the people of Panama.

As far as I am concerned, they are pretty good people. And you know, I am from the old school of the revolutionary warfare environment: One, you never do anything that is not good for the people; and two, you do not make any more enemies than you already have.

I think there are large factors at stake here within the hemisphere and the Central America region. In my view, the Panama Canal should not be made a part of this current requirement. I do not think we should politicize that, either.

I think that it would be well if we really tried to shape events, and by that I mean, now do we want it to look like next week, next month, next year, and then take a look at how we would employ the various elements of power to come to that kind of an end game.

I do not know if I answered your question, but I am very concerned about this.

Senator McCain. My time has expired. But I guess, if I understand you correctly, you do not believe that we have exhausted all of the options besides the military option yet?

General Gray. Al Gray does not believe very much in economic sanctions and all that kind of thing, and I do not think the audit trail supports those kind of activities, except perhaps in very few instances.

Senator McCain. Thank you very much, Mr. Chairman.

LX AMPHIBIOUS SHIPS

Senator Kennedy. I have just two final questions, General. First, in your statement you note the need for a new amphibious ship, the LX. The first of these ships would enter the service in the mid-1990's. The need for a new ship provides an opportunity for new ideas and new designs and new development.

I was interested in the types of designs now and what you might be thinking about, and I would be particularly interested whether it might be possible to design a ship that might double as a fast sealift ship, helping in still another vital area which we have.

General Gray. Personally, I have a great interest in this fast sealift and the entire topic and what it means. I support endeavors to improve and create a fast, balanced sealift capability.

I think we must have improved means to move our military forces to various areas of the world and to sustain them, and particularly our Army forces. I think—and I have mentioned this a couple of times to groups such as the American Society of Naval Engineers—it would be most interesting if you could take a look at the fast sealift requirement, also look at the requirement to really shore up and expand our maritime sealift capability and our merchant shipping requirements.

To me, the real answer to the trade deficit is American goods in American bottoms.

I think if you looked at the fast sealift requirement and looked at the maritime requirement and then looked at the requirements for surface ships, not just for amphibious ships but all types of surface ships, and then took that a step further from the engineering

standpoint and examined common hulls, common kinds of ideas, that maybe, just maybe we could have a breakthrough here, the end result of which would be a quantum step forward in terms of aggregate maritime lift.

Senator KENNEDY. I appreciate that response. We had a hearing on this just this past week. This whole area in terms of fast sealift is both critically important, as you mentioned, and I think there are some important new concepts and ideas which would provide for that kind of quantum jump.

We need to get all of the thinking that we possibly can focused on that particular requirement.

Let me just finally go into the area of, in the next 5 or 6 years we will take delivery of five of the new LHD–1 amphibious assault ships, which are aircraft carriers about half of the displacement of the *Nimitz* class carriers and with a flight deck about 20 percent shorter, ships that are designed to carry helicopters and the AV–8B Harriers.

If these ships were loaded completely with Harriers, how many could they carry?

General GRAY. We can provide you that data for the record.

[The information follows:]

LHD–1 CLASS AND AV–8B

The LHD–1 Class is a multipurpose amphibious assault ship designed to support the surface and air landing of troops and equipment during amphibious operations. The ship is convertible to the secondary mission of sea control. Study indicates that while serving as a sea control platform the LHD–1 Class can operate (handle and build ordnance at the necessary rate to sustain) twenty AV–8B's. A relatively large quantity of mission specific gear and equipment would require embarkation at conversion. Other equipment, already in the ship and identified in support of the amphibious assault mission would be displaced. Accordingly, the simultaneous execution of both missions (amphibious assault and sea control) is not possible when the ship is outfitted (converted) for sea control

AIRCRAFT CARRIER REPLACEMENTS

Senator KENNEDY. The thing that I am interested, in, and you can provide that, is this: If the ships, in company with Aegis ships and perhaps a battleship—do you see the possibility of replacing an aircraft carrier in any scenario?

General GRAY. Again, I would really have to think that through. I think that it could, it certainly could augment and expand the versatility of carrier type operations in given regions.

But when you talk about the aircraft carrier vis-a-vis an amphibious platform that carries only Harriers and helicopters, it could certainly handle the close air support requirements and multi-mission capability there. But you are not going to have a true total air defense capability for the carrier battle group.

So they really are two different kinds of platform requirements.

Senator KENNEDY. Yes, they are. But I am really interested in your earlier assessment in terms of the nature of the threat that we are going to be facing. I saw one of these ships in operation, in the Persian Gulf. Most of the aircraft at that particular time dealt with minesweeping responsibilities, but you could also see where, at least if it had the Harrier aircraft as well as some helicopters, it

certainly would have provided some air cover in that particular region, which at least appears to be desirable.

The aircraft carrier, as you well know, was stationed outside the Straits of Hormuz, and by and large, from the various commanders over there, there were general reservations of having it go on into the gulf.

General GRAY. Yes.

Senator KENNEDY. I was just wondering about this kind of utilization, this kind of application.

General GRAY. As you recall, when we talked about that just prior to your visit out in the gulf, you are quite right. At that particular time if there was a need for close air support, sustained close air support, really the AV-8B's that were in the Mediterranean aboard the helicopter carrier were the only capability. We had contingency plans to make that if so required.

So again, when you can operate from small platforms, ashore or afloat you just add to that aggregate arsenal capability. There is no question about that.

Many of those kinds of things could be undertaken by the platform that you described and the capability therein.

HARRIER

Senator KENNEDY. Finally, do you have suggestions about how the Harrier could expand its capabilities?

General GRAY. Yes. We need to get the upgraded engine and the new radar capability added to the total system. Then we will have a true day-night capability. We have the terrain-following capability already; the new radar and engine upgrade will give us the capability we need.

Senator KENNEDY. It is in the budget at the present time, and you put a strong priority on that?

General GRAY. Yes, sir, absolutely.

Senator KENNEDY. Senator Symms.

M-1 TANK

Senator SYMMS. Thank you very much, Mr. Chairman.

General, I have one other question that I would like to ask you. I note that in the HASC markup they restored 66 of the deleted M-1 tanks. How critical do you view those M-1 tanks for the current Marine Corps?

And also, what is your viewpoint in the future of some of these new light armored vehicles that are available, that have a very high technology armor-piercing, but a lighter gun and a light armored vehicle that is actually helicopter lift-transportable?

General GRAY. We do have a requirement, a longstanding requirement for some full-up armored battalions. We have long had three tank battalions in the active structure and two in the reserves.

And we are currently equipped with the older M-60A1 tank, and by design over time, recognizing the Army need in terms of the requirement and need for the central region and all of that, we had planned to replace our M-60A1 tank fleet with the M-1A1 tank with the up-gunned version and with the improved armor.

We, because of the aforementioned $12.6 billion budget reduction that we went through within the Department of the Navy last December, because the green dollar budget is as small as it is and the aviation plans and related activity are Navy blue dollars, we have very few big ticket programs. When we were given instructions for vertical cuts, then we had to look at the few programs we have, and armor is one of them.

We built a reduced procurement plan to reduce from fielding a battalion, which we had intended to do in the initial 1989 submit, to a company of tanks. We hoped that over time we could strengthen that program to get the armor we needed.

We are going to buy far fewer of the new M-1A1 tanks than we have in the existing M-60A1 fleet today.

Senator SYMMS. Is part of it just the tradeoff? You would just rather buy more ammunition for the M-60's and have plenty of ammunition than to buy new tanks, is that part of it?

General GRAY. Well, part of it, part of it is a tradeoff. You can only, because of the expense of the M-1A1, buy so many.

We are hopeful that we can have that money restored.

We have explored a very, very detailed armor study as part of our force structure effort this winter. There are only so many things you can do.

We have looked at the M-60A1. We do not have the M-60A3 that the Army has, which has an improved fire control system, and that is a fairly substantial cost, to fix that up.

We looked at something called an M-5, if you will, which was to remove the turret, strengthen it, and increase the fire control system and the like. That was very expensive, and that would have given us at the end still a 1950, 1960 chassis, and all that that means. And so it just really is not economical for us to pursue that.

We will have in any event a high-low mix for some time to come, and we plan for that. And as you know, with the support, indeed at the suggestion, of this committee, in 1980 during the rapid deployment hearings we were asked that, if we were plussed up, would we be interested in light armored vehicles.

And we said yes, and in 1981 we tabled an acquisition plan which called for a light armored vehicle program to include eight variants. Four years from the date we said yes to the concept and 3 years from the day that we tabled the plan before this committee and others, we fielded the first light armored vehicle battalion with a basic variant, the LAV-25.

We have fielded the mortar variant, and we are prepared to field the engineer variant, and so on. There are two variants which are not as far along in terms of acquisition, and that is the air defense variant and the assault gun variant.

That is because the DOD and the Congress, properly, requested additional project definition data and so on. There was also a reduction in the overall procurement of LAV's a few years back.

We have provided that data. These programs are on track, and you can see the assault gun variant in our request this year. We need weapons that shoot back, and it is not necessary, in my operational judgment, for every weapon to kill every T-80 plus-up tank in the frontal basis.

What is needed are many different kinds of weapons on the battlefield so that you can use tactics and techniques and many different kinds of capability to create uncertainty. Our maneuver warfare doctrine encourages attack from the side, rear, armor ambushes and all of that kind of thing.

That is why we have this balanced armor/antiarmor program. I have asked for the M-1A1 tank because I want my Marines to go into combat with the best armor we can provide them; I do not want Marines going to combat with armor that is not as good as that of the Oklahoma National Guard.

Senator SYMMS. Thank you very much, General.

I also want to add myself to the list of marines everywhere and the American people for the just bang-up job you did on 60 Minutes. I think that it should have a positive impact to help support the programs that I think we need in the country, and you did an excellent job, and I am really very proud of you for that.

I would also like to, Mr. Chairman, say to the General that, in your spirit of trying to do what is good for the people, that General Jenkins and his fine staff here on the Hill, plus a General who, I will have to get his name, but he is working that problem on the Idaho certified seed potato program at Camp Pendleton housing, that I really want to compliment all of them, because I hope they worked out a solution that was satisfactory for the Marine Corps, and I know that there is a group of people in Idaho who rely on some of that land in Camp Pendleton to certify the seed crop that grows 30 percent of the Nation's potatoes.

And we appreciate the cooperation we have gotten and hope that that will be resolved. But your people deserve a real pat on the back for trying to work that out with us, and I thank you for it.

General GRAY. Thank you very much, sir.

Senator SYMMS. Thank you, Mr. Chairman.

Senator KENNEDY. General, once again we thank you very much. Certainly those who have joined you today have to have a great deal of confidence in your knowledge and understanding of these various programs and weapons systems. It has been a real tour de force.

We thank you very much, and we look forward to working with you as you move through the whole budget process, and also work with you to ensure that your goals for the marines are achieved.

I do have one question from Senator Glenn. Perhaps you can respond in writing.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN DIXON

MARINE CORPS ASSAULT GUN

Senator DIXON. Why hasn't the Marine Corps exercised the options recently contracted to continue test and evaluation of the 90mm gun as recommended by the Naval Surface Weapon Center to satisfy the Marine Corps assault gun requirement?

General GRAY. An option to continue T&E of the 90mm at NSWC Dahlgren was not exercised because sufficient data is now available. The Marine Corps is in the process of determining final details of the operational requirement for the LAV-Assault Gun (LAVAG). This operational requirement will become the basis for a solicitation in fiscal year 1989 for competitive development/procurement.

Senator DIXON. With recent demonstration of the 105mm and 90mm gun systems given to the Marine Corps including a 90mm gun system interchangeable with the

present 25mm gun turret, why did the Marine Corps change their acquisition strategy from a less expensive non-development item type of procurement with early testing to a full development strategy that stretches the acquisition time?

General GRAY. The Marine Corps has not changed LAV-AG acquisition strategy as it is still in formulation. The acquisition strategy, when complete, will balance operational requirements with the total life cycle cost (LCC) of an LAV-AG force. The LCC includes not only development costs, but procurement and operations and support costs which are significantly larger. In particular, the cost of ammunition will have a large bearing on acquisition strategy due to the magnitude of ammunition costs in LCC. Currently, Marine Corps procurement of production LAV-AG's would commence in fiscal year 1993. Sufficient time is thus available to complete any LAV-AG development, assuming RDT&E contracts are awarded in fiscal year 1989.

Senator DIXON. Why wouldn't it be reasonable and important for the Marine Corps to acquire an existing assault gun capability to meet their immediate needs of the Marine Corps, and if necessary to continue a development program for a new and larger LAV to expand their assault gun option to larger caliber weapons in an extended time frame?

General GRAY. The Marine Corps must examine all facets of acquiring an LAV-AG. While expediency is desired, meeting operational requirements and minimizing total cost are more important. The requirements of the U.S. Army are also important as the Army may well procure whatever gun system which Marine Corps selects. This has important procurement and support implications to both the Marine Corps and the Army. There is no intention on the part of the Marine Corps to develop a "new and larger" LAV. Whatever gun systems the Marine Corps finds acceptable in operational capability and costs must be integrated on the present LAV baseline chassis.

QUESTIONS SUBMITTED BY SENATOR JOHN GLENN

Senator GLENN. General Gray, very recently you changed the terms Marine Amphibious Force, Marine Amphibious Brigade, and Marine Amphibious Unit to Marine Expeditionary Force, Marine Expeditionary Brigade, and Marine Expeditionary Unit. Would you explain your rationale for these changes and what it means in terms of the Marine Corps' operation orientation?

General GRAY. This change in designation is being made to more accurately reflect Marine Corps missions and capabilities. The Marine Air-Ground Task force which we forward deploy around the world are not limited to amphibious operations alone. Rather, they are capable of projecting sustained, combined arms combat power ashore in order to conduct a wide range of missions essential to the protection of our national security interests. The ability to project expeditionary military power is an essential component of our national security strategy. Expeditionary forces can be a critical factor in achieving a positive outcome in regional crises where we have no established bases, logistics infrastructure or in-place command and control mechanisms. Because these are the most likely contingencies we will face and our Marine Air-Ground Task Forces are so ideally suited for such circumstances, they should bear designations which appropriately describe their full potential. There is historical precedent for this terminology. Prior to WWII, and for a time thereafter, Marine units dispatched for overseas service were generally designated as expeditionary brigades. During WWII the term amphibious was adopted because it depicted Marine Corps' missions in the Pacific Theater. After the war, the previous expeditionary designation was restored only to be dropped again in 1965, as Marine Corps units were committed to comb operations in the Republic of Vietnam. Since then, Marine task units have borne the amphibious designation. Our Corps is an expeditionary intervention force with the ability to move rapidly, on short notice, to wherever needed to accomplish what is required. Our Marine Air-Ground Task Forces have little or no need for Host Nation support, overflight rights or previously negotiated Base Support Arrangements. We bring with us from the sea what we need to sustain ourselves for the quick accomplishment of the mission or to pave the way for follow-on forces. Keep in mind that this is our reason for being and that the return to expeditionary designations for our task units is intended to reinforce this sense of purpose.

Senator KENNEDY. The committee stands in recess.

[Whereupon, at 3:53 p.m., the subcommittee was adjourned.]

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